BRANCH OF WILDLIFE REFUGES

NARRATIVE REPORT

ROUTING SLIP	DATE February 18,1952
Hro Salyer Hro Krummes	Mr. Dullont (A)
SECTION OF OPERATIONS:	THE MORTEN EM

SECTION OF HABITAT INPROVEMENTS	
NE STITLE TH	Mr. Rubichek
Ann USB	Mr. Stiles

SECTION OF LAND MANAGEMENTS

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STENOGRAPHERS:

REFUGE Lake Ilo & District 4 Easements PERIOD September-December, 1951

LAKE ILO REFUGE.

I. GENERAL

A. Weather Conditions.

Precipitation was below normal at Lake Ilo Refuge during the report period. The temperatures averaged above normal during September and October and below normal during November and December. Temperatures were below zero during most of December. It is estimated that six inches of snow covers the ground at the end of the period.

Weather data for the past four months are as follows:

Month	Precipitation	Snowfall	Max. Temp.	Min. Temp.
September	1,11		82	20
October	1.43	5.5"	80	11
November	.16	2.7"	50	-15
December	•66	8.3	47	-36
	3,66	16.5 E	ctremes 82	-36

B. Water Conditions.

The water elevation was 14 inches below spillway crest on September 1, and the ice level on December 31 was 20 inches below the spillway - a total drop of six inches during the period.

The entire lake was completely frozen over by November 2; this was the earliest freeze-up on record. The date of freeze-up in 1950 was November 8, in 1949 - December 5.

The ice was measured on November 5 and found to be seven inches thick; a re-check on December 27 showed the ice to be 25 inches thick.

C. Fires. None.

II. WILDLIFE

A. Migratory Birds.

Approximately 10,000 ducks and 2,000 coot were present on the refuge on September 1. By October 15 their numbers had increased to 15,000. The peak concentration was reached during the latter part of October at which time an estimated 30,000 ducks were using the refuge. The total figure was below the average for past years.

The number of diving ducks present this year was higher than usual. It is estimated that 10,000 divers were present on the refuge during the latter part of October.

The peak concentration of ducks was present just before freeze-up on November 2. Most of the ducks went on south on November 1. On November 2 it was estimated that 600 mallards and a few blue-bills were on the refuge; this number decreased to approximately 100 in a few days. On November 29, 26 mallards were observed. Only six mallards were observed during the first part of December. None have been observed since the 10th of December.

Approximately 1,500 Canada's, white-fronted and snow goese used the area during the fall migration period. There were approximately 600 geese on the refuge during the latter part of October.

The shore bird migration was about the same as last year (which was smaller than usual). A number of white pelicans used the area during September and October.

B. Upland Game Birds.

It is estimated that 150 ring-necked pheasants are using the refuge this winter. It was believed that about 75 pheasants were using the refuge at the beginning of the period, and then their numbers increased during the hunting season. Very few pheasants are present in the surrounding vicinity.

Very few sharp-tailed grouse have been observed on the refuge or in the nearby vicinity. Twenty five have been observed on the refuge during December.

Fewer Eungarian partridges have been observed on the refuge during this report period than in the past. It is estimated that 40 are using the refuge at the present time.

C. Big Game Animals.

Only one white-tailed deer was observed on the refuge this period. A number of white-tailed and mule deer have been observed in the vininity of the refuge.

D. Fur Animals, Predators, Rodents and other Mammals.

It is estimated that the muskrat population consists of approximately 500 animals. Plans were made to remove 100 rats, but to date only 35 have been trapped. Due to the early freeze-up, it is doubtful if any more will be taken this season. Mink sign indicates a population comparable to that of last year; six have been removed to date. Weasel sign is common; it is believed that there are more weasels present this year than for several years past. Skunks are too numerous; two have been trapped and eight dens have been gassed with the exhaust of a pickup.

Very few coyotes are present in this area - none have been observed on the refuge or in the near-by vicinity during the period. A number of fox tracks have been seen but it is believed that the number of foxes is rather small.

No beaver are on the refuge at the present time; there is a colony in the creek just below the refuge, however. Apparently these beaver were on the refuge for awhile as a few refuge trees were cut down in September and October.

Rabbits - Jack rabbits are numerous on the refuge and in adjacent areas.

E. Predacious Birds, including Crows, Ravens, Magpies.

A number of golden eagles have been observed during the winter on the refuge and in the vicinity. Two prairie falcons have been observed on the refuge during the period.

No snowy owls have been observed this period; this is unusual.

F. Fish.

There was no fishing on the refuge this period due to the winter kill of last year. Small perch and minnows are numerous in the lake. 10,000 wall-eyed pike and 5,000 black bass fingerlings were planted during the summer by the State Fish and Game Department.

III. REFUGE DEVELOPMENT-MAINTENANCE

A. Physical Developments.

- 1. Frightened ducks out of fields near refuge.
- 2. Removed and salvaged some fence below dam.
- 5. Mowed weeds on refuge roads.
- 4. Installed insulation in residence at headquarters.
- 5. Repaired refuge fence, replaced 2 wooden corner posts with steel corner posts set in concrete.
- 6. Cut grass and weeds around buildings at headquarters.
- 7. Located and gassed 8 skunk dens on refuge.
- 8. Reputtied and painted storm windows.
- 9. Measured hay harvested on refuge.
- 10. Hauled coal from local coal mine to headquarters for heating garages and office.
- 11. Installed shingles on granary 20% completed.
- 12. Installed asphalt tile on basement floor of Ilo Residence 50% completed.
- 13. Installed platform and stanchions for two cows in barn at headquarters.
- 14. Inspected dam for muskrat and pocket gophers three large holes were dug out and refilled.

- 15. Made minor repair on Diamond T truck, IHC Pickup and other equipment.
- 16. Removed coal hot water heater from basement of residence.
- 17. Observed wildlife, checked water levels and structures.

B. Plantings.

No crops were planted by refuge personnel. 60 acres of wheat and barley were planted this season under cooperative agreements. Part of the refuge share was left standing for wildlife food. Three acres of barley and eight acres of wheat were harvested for wildlife feeding. Refuge wheat averaged 9 bushels and barley 10 bushels per acre. The barley had 75% hail damage and wheat about 20%.

IV. ECONOMIC USE

A. Grazing.

One grazing permit was issued this year.

B. Haying.

Four haying permits were issued to neighboring farmers.

C. Fur Harvest.

One permit was issued to trap on the refuge. A complete report of furs harvested will be included in the Jan.-April, 1952 report.

See NR forms for further information on economic uses.

VI. PUBLIC RELATIONS

A. Public Uses.

- 1. Hunting Use. None.
- 2. Fishing Use. An estimated 800 visitor-days for the year.
- 3. Miscellaneous Use. (Includes picnicking, swimming, sightmeeing, bird-watching, business or official use, visitors regarding economic uses). An estimated 1590 visitor-days for the year.

The Recreational Area, which is under the management of the Dunn County Park Board, was maintained in good order. The public used the area a great deal during the year for picnicking and swimming in the summer, and for skating in the winter.

B. Visitors.

9/30 Mr. Henry J. McKridy, Dist. Game Warden visited refuge.
10/12 Messrs. Gillett, Carpenter and Lampio of Finland. - visit.
10/19 Messrs. J. Clark Salyer, Gillett and Carpenter. - visit.
10/28 Mr. Henry Robinson, Warner, N.D. in regards to securing trapping permit.

Mr. A. B. Rosendahl, permittee trapper, visited refuge several times in regard to trapping, fur division, etc.

C. Refuge Participation.

A considerable amount of time was spent in assisting local farmers with duck depredation control.

D. Hunting.

No hunting is allowed on the refuge, but the refuge plays an important role in this area in supplying fair goose and duck shooting on adjacent lands. Twenty goese were shot that we knew of; probably as many or more were shot that we did not have the opportunity to check. Duck hunting was considered to be very poor this year due to the mild weather that prevailed during the hunting season - until the first of November when severe cold weather drove the ducks on south.

E. Fishing.

Winter fishing was permitted from December 1, 1950 to March 1, 1951. Large numbers of fishermen used the area when weather permitted. Perch was the species caught most frequently and it was estimated that 12,000 perch were taken during the winter season.

When the regular season opened on May 16, large numbers of fishermen again flocked to the lake. Due to the winter-kill that had occurred, however, no fish were caught. (See narrative reports for Jan.-April and May-August, 1951)

As previously indicated (Section II,F) 10,000 wall-eyed pike and 5,000 black bass were planted in Lake IIc this past summer by the North Dakota State Fish and Game Department.

F. Violations. None.

HIDDENWOOD

I. GENERAL.

Precipitation was above average during September and below for October, November and December. Water levels were higher than normal during the period; in fact, the water level was believed to be the highest since the refuge was established. It is believed that this is the reason why there are fewer bulrushes than in past years.

II. WILDLIFE.

When the area was visited on November 7, no ducks were present, but it was reported by local farmers that a large number used the refuge during September and October. It is believed, however, that fewer ducks used the area than in the past. In the past, this lake was completely covered with bulrushes; only a few remain this year. No upland game birds were observed but it is believed that a few Hungarian Partridge and sharp-tailed grouse are using the area.

The muskrat population appears to be very small compared to other years. Mink signs were numerous and it is believed that more are using the refuge than ever in the past.

A trapping permit was issued to a local farmer to trap fur-bearing animals on the refuge. No report has been received as yet as to what has been caught.

III. PHYSICAL DEVELOPMENTS.

Made a survey of muskrat and mink populations and issued trapping permits. Made wildlife observations.

LAKE PATRICIA

IL GENERAL.

Precipitation received during the period was above normal. It is believed that the water level was higher than usual.

II. WILDLIFE.

The area was not visited during the report period, but it is believed that the usual numbers of ducks were present during migration. Very few pheasants and only a few Huns and sharp-tails are believed to be using the area. In the past, large numbers of pheasants were to be found on this refuge.

III. PHYSICAL DEVELOPMENTS.

Not visited this report period due to the fact that the N.D. State Game & Fish Department has control of most of this easement refuge.

LEGION LAKE

I. GENERAL.

Precipitation and snowfall was about normal during the report period. The water level is considered very good for the amount of rainfall that occurred. The water level was approximately 12 inches below spillway crest at the time of freeze-up on November 2. Very poor crops were harvested in this vicinity.

II. WILDLIFE.

It is believed that fewer waterfowl used the area during migration than in the past. When the area was visited on October 22 the following birds were observed: 20 white-fronted geese, 200 redheads, 200 ruddy ducks, 100 canvas backs, 300 mallards, 50 coot and 15 yellowlegs. It was reported that several thousand ducks were using the area during the latter part of September and first part of October, but not as many as in the past. No upland game birds were observed on the area, but it is believed that a few sharp-tails and Huns are using the area. Hunting was considered to be very poor in this vicinity this season.

Very few signs of muskrats and only a few mink signs were observed. A trapping permit was issued to a local farm boy who has since reported that he has trapped three mink.

III. PHYSICAL DEVELOPMENTS.

- 1. Fur bearing animal, upland game bird and waterfowl censusing.
- 2. Hauled and placed 76 cu. yds. rock below spillway in hole that had been washed out in downstream apron. Two dump trucks and a front-end loader were used. 20 man-hours were used in hauling rock and 12 man-hours used for placing rock.
- 3. Farmers and sportsmen were contacted in regards to hunting and waterfowl populations.

MCLEAN

I. GENERAL.

Precipitation in the form of rain was above normal during September and October. The snowfall during November and December was below normal. The water level was considered to be very good during the report period. It was approximately one foot below spillway crest throughout the period and remained at this level at the time of freeze-up on November 2. Fair crops were harvested in this vicinity.

II. WILDLIFE.

It is believed that more than the usual number of mallards used the area during migration. Some crop damage was reported near the refuge.

A few sharp-tailed grouse, Hungarian partridge and pheasant were observed on the refuge.

The muskrat population is believed to be the highest since the refuge was established; approximately 100 muskrats are present. Seven large muskrat houses were observed on the north side of the lake where the bulrushes are heaviest. A number of mink signs were also observed. Two trapping permits were issued to farm boys living on the refuge.

III. PHYSICAL DEVELOPMENTS.

- 1. Structures checked and water level noted.
- 2. Discussion on depredation and hunting with local farmers and sportsmen.
- 3. Checked signs and markers.

PRETTY ROCK

I. GENERAL.

Precipitation and snowfall were above normal for the entire period. The water level was 10 inches below the spillway at the beginning of the period and 10 inches below at the time of freeze-up on November 2. Very good crops were harvested in this vicinity.

II. WILDLIFE.

On October 10 there were an estimated 16,000 ducks on the refuge and on November 13 an estimated 7,000. These ducks consisted mainly of mallards with a few blue-bills. It is believed that there was more waterfowl usage of this area than a year ago.

Very few upland game birds were observed on the refuge or in the vicinity during the period when visited. It is believed the ring-necked pheasant population is the smallest since the refuge was established. A few sharp-tailed grouse and Hungarian partridge are believed to be using the refuge and their numbers are believed to be about the same as last year.

The muskrat population appears to be larger than usual; it is estimated that 400 are present on the refuge. Mink signs were numerous this fall; it is believed that more mink are using the refuge than in the past. Two trapping permits were issued to local farmers that live on the refuge to trap mink, skink, muskrat and badger during the State trapping season. Jack rabbits are numerous in this area.

III. PHYSICAL DEVELOPMENTS.

- 1. Inspected structures and observed wildlife. Contacted farmers in regard to waterfowl populations & issued two trapping permits.
- 2. Hauled 12 ou. yds. rock and placed on shoulders of road that crosses refuge.

STEWART LAKE

I. GENERAL.

Precipitation and snowfall has been above normal during the period. The water level was above normal for the period; it has been approximately one foot below spillway throughout the period. Very good crops were harvested in this vicinity.

II. WILDLIFE.

It is estimated that 31,000 ducks used the area during the fall migration. When the refuge was visited on October 13 it was estimated that 12,000 ducks were present. These birds consisted mainly of mallards. On November 9 it was estimated that 12,000 mallards were on the refuge. It was reported that a few goese used the refuge during migratiom; these were Canadas, white-fronted and snow goese.

Very few ring-necked pheasants were observed in this vicinity and none on the refuge. No sharp-tailed grouse or Hungarian partridge were observed but it is believed that a few are useing the refuge.

Very few signs of muskrats were observed on the refuge this period. A number of mink signs were observed. A trapping permit was issued to a farm boy whose father owns land on the refuge. Skunks are numerous in this area and it is believed that a few are on the refuge.

It is believed that a number of antelope and deer used the refuge this period as they are present in the general area.

III. PHYSICAL DEVELOPMENTS.

- 1. Inspected structure and wildlife censusing.
- 2. Checked water levels and issued four trapping permits.

WHITE LAKE

I. GENERAL.

The precipitation and snowfall received during the period was above normal. The water level was only a few inches below spillway crest at the beginning of the period and one foot below at freeze-up on Nov. 2. Very good crops were harvested in this vicinity.

II. WILDLIFE.

It is estimated that 16,500 waterfowl used the refuge during the fall migration and that the peak concentration was in the neighborhood of 13,000. Upland game birds are scarce in this area. While none were actually observed during the report period it is believed that a few

pheasants, sharp-tailed grouse and Huns are using the refuge.

A few muskrat, mink and skunk signs were observed on the refuge this fall. A trapping permit was issued to a landowner to trap furbearers on the refuge.

III. PHYSICAL DEVELOPMENTS.

- 1. Structures and water levels checked.
- 2. Wildlife censusing and prospective trappers contacted. One trapping permit issued.

NOTE: The report this period for Lake Ilo and the District IV Easement Refuges is based on data supplied by Mr. Chesley M. Dinkins, Maint. Man (General).

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Refuge Lake Ilo Months of September to December 19 51

I. S	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose	Number None et	10/17	Number	Date 10/15-50	Number	Date	Young P Breeds Seen	Estimated Total	Estimated for period
II.	Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose	Home et	10/17	or homes by	roduced base		ations an	d actual o	ompa on ra	bre-
	Canada goose Cackling goose Brant White-fronted goose Snow goose	18		1,000	10/15-50	gm 60	11/10	TOETHER TH	mu vaher	1 200
	White-fronted goose	Party and the same of the same			A Comment of the Comm			aremod in	4970 2000012	1,000
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i	Ducks: Mallard Black duck	given to the first	those of	80,000	10/20-51	6	12/10	meerned 1	a the repor	40,000
0	Cadwall Baldpate	In addition	ion to the	200 500 2,000	10/1-20 10/1-20 9/10-50		cies ccet	Fring on r	afuge during stion shoul	300 1,000 6,000
o	Green-winged teal Blue-winged teal Cinnamon teal			25 1,000	9/20-10/10 9/20-10/10	400	10/20	M. Pinki mid-am		2,000
1	Shoveller	• • • •	• • • •	1,000	9/20-10/20	200	10/30			2,000
open.	Ring-necked duck Canvas-back Scaup	• • • •		2,000	10/10-25	200	11/1	бе зеквоп		5,000
1	Golden—eye Buffle—head Ruddy duck	stood com		25 25 2,000	9/20-30 9/21-50 10/10-30	500	11/1	as when	,	25 25 3,000
IV.	Coot:	PASTRG T		2,000	9/10-11/10	100	10/30		98,886	4,000

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

DEPTHENT OF THE PROPERTY OF THE SUMMARIES

Dates waterfowl counts made			Total	materfowl us	age during pe	riod _	71890	
Percent of waterfowl area c	overed	31000 k	Peak w	aterfowl num	bers		48,350	e luce
Dates brood counts made		12000 J	Areas	used by conc	entrations _	Entire	area.	ž
Percent of area covered in	brood counts	25	8\37-20					52
Total production:	A 4 6 6 6 A A 4 6 8	2,000 1	Princi	pal nesting	areas this se	ason _		6,000
Geese		1,000						,
Ducks	b 6 6 4 6 4 6 4 6 6 6	5,000 l	1/50-30/50	200	20/50			1,000
Coots		7 300 A	/20-10/30	Reported by	Chesley N.	Dinkins		the be
(1) Species:	In addition to the reporting period sho given to those specific	ould be add	led in app	ropriate spa	ces. Special			g the d be
(2) First seen: (3) Peak concentration:	The first refuge reperiod, and the number	cord for the	ne species This colu	during the	season concer apply to resi	ident sp	ecies.	ting
(4) Last seen:	The last refuge receperiod.	ord for the	species	during the s	season concer	ned in t	he report:	ing Trans
(5) Young produced:	Estimated number of sentative breeding a 10% of the breeding	areas. Bro	ood counts	should be m	nade on two or	more a	reas aggr	egating
(6) Total:	Estimated total number may or may not be more of the migrational may not be more than the migrational may be more than the migrational may be made and the migrational may be migrater and migrational may be migrater and may be m	ore than th						

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

MY LEBELIN

Refuge Hiddenwood Months of September to Documber 14451

	(1) Species	(2 First		(3) Peak Conc		(4) Last S		Young P	5) roduced	(6) Total
(e)	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
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(4)	Geese: Canada goose Cackling goose	None of	merved.	ed for the	Burren di	sie om au	Triangle	med to th	reportable	
	Brant		a gauges.	or pps kheir	Sh Carried	TO S. Inv.	rect greekens	Twi letwe		
III.	Blue goose Ducks:	Pick, th	genu ous s	or educe	igt school	does not s	oply to re	Thonk ape	na reporting	
111.	Mallard Black duck	TWO TO C	ose shear	4,000	10/20-51	or avenue	resuce.			5,000
	Gadwall Baldpate Pintail	Branco Co	10, 120	20	10/1-15 10/1-15 10/1-20	the term appear	is country	ng on raid	the during ob	20 50 500
	Green-winged teal Blue-winged teal			400 20 20	10/1-15					200
	Cinnamon teal Shoveller					g didu par	tor then	ge Jaint.		*
	Wood duck Redhead Ring-necked duck			. 100						100
	Canvas-back Scaup			150 200	10/10-20	Them CX mig	FIRST CIVE	369.01		400
	Golden-eye Buffle-head Ruddy duck			20	10/1-15	e wo tak som	Hora persona			20 20 200
	naday duck			200	10/10-20	Signery Will	16,141	There I am		, 200
IV.	Coots			200	10/1-15	TILLIDAY IS	The Market	hours y	2 (20)	400

3-1750 (July 1946)

(over)

Tota	l Production:	SUM	MARIES	
	eese		Total waterfowl usage during	period 7,130
I	ouc ks		Peak waterfowl numbers	5,580
	coots	500	Areas used by concentrations	Entire water area.
	NAME OF STREET		The second secon	
		720	Principal nesting areas this	season
	timography	4.6 4 6 6 4 4 7 6 3 6 4 500		
	sing quay specifies specifies		Reported by Cheel	
			Refu	go Maint, Man (Gen.)
(1)	Species:	In addition to the birds listed or reporting period should be added given to those species of local a	in appropriate spaces. Specia	ng on refuge during the
(2)	First Seen:	The first refuge record for the period, and the number seen. The		
(3)	Peak Concentra-	The greatest number of the specie	es present in a limited interva	al of time.
(4)	Last Seen:	The last refuge percent for the speriod.	pecies during the season concer	med in the reporting
(5)	Young Produced:	Estimated number of young product sentative breeding areas. Brood 10% of the breeding habitat. Est	counts should be made on two	or more areas aggregating
(6)	Total:	Estimated total number of the spensor may or may not be more than that		

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

of the migrational movement.

Refuge Lake Patricia Months of September to December 194/51

	(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total	
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio	
I.	Swans: Whistling swan	Area n	ot visited	during par	Lod.	nould be	sele on two	or spoots to	pe omitted.	cres	
II.	Geese: Canada goose Cackling goose	None o	pserved.		sheers or	and res	Derson ones		V		
	Brant		e p managed	100	10/20-50					100	
	Snow goose Blue goose	and the state of	d the man		1970 bymm2	dues not	apply to re	argeor ats	-79E		
II.	Ducks: Mallard Black duck	The to I	Dogs aboo	7,000	10/20-11/2	at algain	Licenteal	urbec 31	Ne 14 hylasij	10,000	
	Gadwall	f House	n to the	70	10/1-15	M. Perge pla	e et apeca	to the rente	SU EMBUTT D	100	
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	Blue-winged teal Cinnamon teal			300	10/1-15		2007.00	e Halift.	sar (gas t)	500	
	Shoveller	• • • • •	• • • • •	100	10/20-30	Reporte	d by -0500	K	CERT .	200	
	Redhead Ring-necked duck	Y 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100	10/20-30					200	
	Canvas—back Scaup Golden—eye Buffle—head			150 300	10/20-50	The Area	ereas thes	26CATLA		200 400	
	Ruddy duck			200	10/10-50	et by son	c snetupyobs	Extra se	DOL THOS!	200	
IV.	Coot:			1,000	10/1-15		meta cur suc		1	1,000	
									4		

3-1750 (July 1946)

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(over)

SUMMARTES

<u> rota</u>	l Production:	
G	eese	Total waterfowl usage during period 14,150
D	uc ks	Peak waterfowl numbers 9,260
С	oots	Areas used by concentrations Entire water area.
		Principal nesting areas this season
	Constant post	Reported by Gheslev M. Dinking Refuge Maint. Man (Gen.)
(1)	Species:	INSTRUCTIONS In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(1)	-0.54244	reporting period should be added in appropriate spaces. Special attention should be
(2)	First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3)	Peak Concentra-	The greatest number of the species present in a limited interval of time.
(4)	Last Seen:	The last refuge recent for the species during the season concerned in the reporting period.
(5)	Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6)	Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Legion Lake Months of September to December 194 51

	(1) Species	(2 First		Peak Conc) entration	(4) Last S	een	Young P	coduced	(6) Total
	2bec 1ee	FILSU	Goen	Teak Colk	GIIOTAGIOII	Desc O	1	Broods	Estimated	Estimated
	Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Perio
I.	Swans: Whistling swan				nd odnina ab	orne up se	THE THE TWO	a more ar	es aggrega	
II.	Geese:		-							
	Canada goose	None of	sorved.							
	Cackling goose Brant	Many Land	THE RECE		Part of the				·	
	White-fronted goose Snow goose Blue goose	None of	10/22 perved.	76	10/20-50	7 7 17 11	ed riigas	T = 1 = 100-0		100
		The second second	May ramps				W. C. 17 540	Tasat swe	7424	
III.	Ducks:	E GABLI		5,000	10/1-10	TANK PIE B	A STATE AND ASSESSED.	Tries At 6	LE LANDING	8,000
	Black duck	maket on 194	026 2		And Mary len	The property last	C. T. T.			
	Gadwall		ed Lon Pho	50	10/1-12	- 11 × 01 ==	10. Table 1	L MANAGE I	in desiring by	100
	Baldpate			100	10/1-15	F GPS- I	the same		s during th	150
	Pintail			800	10/1-15				1 1 6	1,000
	Green-winged teal			20	9/19-30					20
	Blue-winged teal			200	9/10-30	:				300
	Cinnamon teal Shoveller			200	9/20-10/20	Value mag	The sale	F. Ciph		500
	Wood duck Redhead			400	10/10-30					500
	Ring-necked duck								1 1	
	Canvas-back			. 200	10/10-30	the start of the Co	Company of the last	The Part of the Pa		300
	Scaup Golden-eye			400	10/10-30					500
	Buffle-head Ruddy duck		.**	200	10/10-50		Lan, as	· jungang d	open elema	400
							- 61		D*1.08	
IV.	Coot:		1	400	9/20-10/15		2		3	600
									1,570	

3-1750 (July 1946)

00

(over)

SUMMARTES

Tota	l Production:		30	A COLUMN TO THE	
G	eese			Total waterfowl usage during	period 12,270
D	uc ks			Peak waterfowl numbers	8,745
С	oots			Areas used by concentrations	Entire water area.
	Peak waterfowl numbers Areas used by concentrations Principal nesting areas this season Reported by Cheeley N. Maint. Man INSTRUCTIONS Species: In addition to the birds listed on form, other species occurring on reporting period should be added in appropriate spaces. Special att given to those species of local and National significance. First Seen: The first refuge record for the species during the season concerned period, and the number seen. This column does not apply to resident	season			
			too		
		Reported by Chemical numbers areas used by concentration The addition to the birds listed on form, other species occurr reporting period should be added in appropriate spaces. Spec given to those species of local and National significance. The first refuge record for the species during the season comperiod, and the number seen. This column does not apply to retra— The greatest number of the species present in a limited interest that the species of local and sentative breeding areas. Brood counts should be made on two log of the breeding habitat. Estimates having no basis in factorized. Estimated total number of the species using the refuge during the season concentrative breeding habitat. Estimates having no basis in factorized total number of the species using the refuge during during the season concentrative breeding habitat.	Men (Gen.)		
	A PART HERE		1000		
(1)	Species:	reporting period should	be adde	d in appropriate spaces. Specia	
(2)	First Seen:				
(3)	Peak Concentra-	The greatest number of t	the spec	ies present in a limited interven	al of time.
(4)	Last Seen:		for the	species during the season conce	rned in the reporting
(5)	Young Produced:	sentative breeding areas	. Broo	d counts should be made on two	or more areas aggregating
(6)	Total:		than tha	pecies using the refuge during t used for peak concentrations,	

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Melean Months of September to December 194/51

	(1) Species	(2 First		(3 Peak Conc		(4) Last S		Young Pr	roduced	(6) Total
-410	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
(S)	Swans: Whistling swan	ar or the		remain Production	gentament ja Og berilde gr Hund jakan	policing the billion	THE STATE	Lexus en	ork streets	
II.	Geese:		-							2
	Canada goose Cackling goose	Home ob	erved.	the the block of	berre .		The same and the s	er nin	Limo gent	
	Brant White-fronted goose Snow goose Blue goose		E CONTROL	er, me such				10-1-619		
III.	Ducks: Mallard Black duck	ent six s	er e la composition de la composition della comp	8,000	10/1-50		termine that	Like 12		12,000
	Gadwall Baldpate Pintail Green-winged teal			50 100 600	10/1-20 10/1-20 10/1-20 10/1-10	minus fellow		r na selest Pi so suspi	in Surviva	100 100 800 50
	Blue winged teal Cinnamon teal			200	9/20-10/10		- (-)	* 1 to () ()	F	300
	Shoveller Wood duck	~		100	9/20-10/10		Pro 7 Jenes	142.1.1		200
	Redhead	• • • • •	• • • • •	. 100	10/10-30					200
	Canvas-back Scaup Golden-eye Buffle-head			100	10/10-30			27-13		800
	Ruddy duck			200	10/10-50	en ik wa	-A-TIPAR	Trace and	itan, case	200
IV.	Coots			300				inst Fore	-10,100	400

3-1750 (July 1946)

(over)

SUMMARTES

Tota	l Production:							
G	eese			Total waterfowl usage	during	period	15,150	w ob
D	uc ks			Peak waterfowl number	5		10,200	
- C	oots		100	Areas used by concentr	rations_	Entire	water area.	250
								*
				Principal nesting area	as this	season		200
				30\rc-80				250
		7		Reported by	Chesl	ey M. Dir	alding	50.0
* II	Tour-winged bead			0/30-10/10	Kaint	. Man (G	m.)	200
(1)	Species:	In addition to the birds 1 reporting period should be given to those species of	added	in appropriate spaces.	Specia			165 16 ³ - 16
(2)	First Seen:		local	and National significant	ce.			15,00
		period, and the number see	n. Tl	nis column does not appl	y to res	ident spe	ecies.	
(3)	Peak Concentra- tion:	The greatest number of the	spec	les present in a limited	interva	l of time		
(4)	Last Seen:	The last refuge percent for period.	the a	species during the season	n concer	ned in th	ne reporting	
(5)	Young Produced:	Estimated number of young sentative breeding areas. 10% of the breeding habita	Brook	d counts should be made	on two o	r more an	reas aggregatin	g
(6)	Total:	Estimated total number of may or may not be more that of the migrational movement	n tha					

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Pretty Rock Months of September to December 194/51

Species	First) Seen	Peak Conc	entration	Last		Young P	5) roduced	(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
Swans: Whistling swan				on the second of		or on the	SE STORE SE		
Geese: Canada goose			50	10/10-20					50
Brant		E HI (# Yasas)	OC.		7 8 5		ne. In al	1	
White-fronted goose Snow goose Blue goose	Home ob	orved.	200	10/10-50		The proper			200
Ducks: Mallard	I Parage		15,000	10/20-11/1	•	uwani m		a Louis Profit	20,000
	WHEN THE PER		350	10 / 15	TOTAL IN	and the same	rior committees	CO SOM L AND	
Baldpate		the Maria		10/1-15	HULL BUSH	THE PROPERTY	ms on Lebe	de anamili de	20 0
Pintail			3,000	8/20-9/10					5,000
	Hone ob	erved.	50	9/20-30					50
			500	9/20-30		100	PINE * MOV	100111	800
Shoveller Wood duck	- Av, -		500	-	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Q A LA	distribution of		600
Ring-necked duck		• • • •	200		9				200
				10/10-50	L. SHAND STORY	A THEO PICA	9 Institutes	-	300
Golden-eye			600	10/10-30					800
Ruddy duck			400	10/10-30	us all rev		Logic A	1807.4850	500
amprove a systematic	- 1			Eve Kindet		PC IAM		16:50	
Coots			500	10/1-15	or chil u	neth mag n	E 061 † 680	15, 300	600
	Swans: Nhistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head	Swans: Nhistling swan Geese: Canada goose Cackling goose Brant_ White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Swans: Nhistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck 400	Swans: Nhistling swan Geese: Canada goose Cackling goose Brant	Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Shoveller Wood duck Canvas-back Canvas-back Scaup Golden-eye Buffle-head Ruddy duck 10/10-20 10/10-30 10/10-30 10/10-30 10/10-30 10/10-30	Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Canyas-back Scaup Golden-eye Buffle-head Ruddy duck Ruddy duck Redicad Ruddy	Swans Swan Swan Swan Swans Swans	Swans:

3-1750 (July 1946)

(over)

SUMMARTES

Tota	l Production:					
G	eese			Total waterfowl usage du	ring period_	29,700
D	ucks			Peak waterfowl numbers_		22,050
С	oots			Areas used by concentrat	ions Entire	rater area.
					*	
				Principal nesting areas	this season_	
	* * * * *	* * * * * * * * * * * * *		for the least		
				Reported by	Chesley M.	Dinking
	rainteach reut			83.0 mg	Maint, Man	(Gem.)
(1)	Species:	reporting period should	be adde	d on form, other species occ ed in appropriate spaces. S l and National significance.	special attent	
(2)	First Seen:			e species during the season This column does not apply t		
(2)	Peak Concentra-	The greatest number of t	ha snov	cies present in a limited in	stammal of tim	20
(3)	tion:	The greatest number of t	ne spec	cles present in a indiced in	idel val of the	10.6
(4)	Last Seen:	The last refuge pecerd f period.	or the	species during the season of	concerned in t	the reporting
(5)	Young Produced:	sentative breeding areas	. Broo	uced based on observations a od counts should be made on Estimates having no basis in	two or more a	reas aggregating
(6)	Total:			species using the refuge dur		
		of the migrational movem		at used for peak concentration	cons, dependir	ig abou one nature

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Stewart Lake Months of September to December 194 // 51

	(1) Species	(2) First		Peak Conce		(4) Last		Young P	5) roduced	(6) Total
11	(Stilnstad.	page 1 de	DOL DI PER	theores ma	m8 ema es		Broods	Estimated	Estimated
	Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Period
I.	Swans:	EUROPT-O		trapice.	Salamana i		THE TO D	obj Eponye	26 - 12-12-1	
	Whistling swan	m/major.		Long balo	CGC Detress		* 1000 200	O ME INDIA	LAND CHINASIN	
II.	Geese:								PAR HA LALLA	-
	Canada goose		-1-10 too	50	10/10-30					75
	Cackling goose Brant							The St.	The state of the s	,,,
	White-fronted goose		a se i i i i i i i i i	100	10/10-30					350
	Snow goose Blue goose			25			100	of the last		150 50
	Dide Boope	MATERIAL ST		THE RESERVE	7. 375	Tall Pay	ebbri pa polici	a formura of	GP66	
III.	Ducks:	And the second			e day ago y	trail, sha	FETTINA BUILDING	Wilder In	DE LEGISTRE	, n
	Mallard Black duck	TANK IN A		15,000	10/20-50	THE BURDE				25,000
	Gadwall	SECTION OF		100	10/1-15	nimes ob	men, mark	Property	OT THE PERSON	
	Baldpate Pintail			2000	48		The Secondary	Age to ref	the special of	200 400
	Green-winged teal			50	W			22		2500
	Blue winged teal			500	**		2			50 600
	Cinnamon teal Shoveller			200	10/1-20			1 0012 00	The state of the s	000
	Wood duck			200	10/1-20			a say say	WELL .	300
	Redhead Ring-necked duck	* * * * * *	2. 5. 6. 8	200	10/10-30		5.		-	300
	Canvas-back			200	a de agai be	The Type	LONG LIES			
	Scaup			600	10		3			300 800
	Golden—eye Buffle—head									300
	Ruddy duck			200		. 13	1 1 2 2 2 1	10000000	Acres San As	
		2.								200
IV.	Coots			200	10/1-15					
				800	10/1-15	, = v x , 1 = v ,	i	Do Lland	7	200
	1.37									

3-1750 (July 1946)

₩ 00

(over)

SUMMARTES

Tota	1 Production:	SUMMARIES
	eese	Total waterfowl usage during period 31,125 Peak waterfowl numbers 19,825
C	coots	Areas used by concentrations Entire water area
		Principal nesting areas this season
	The print of the	Reported by Chesley M. Dinkins (Maintenance Man-General)
)	547497X	INSTRUCTIONS
(1)	Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2)	First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3)	Peak Concentra- tion:	The greatest number of the species present in a limited interval of time.
(4)	Last Seen:	The last refuge percent for the species during the season concerned in the reporting period.
(5)	Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6)	Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

of the migrational movement.

00 00

Refuge White Lake

Months of September

to December

19451

	(1) Species	(2 First		(3) Peak Conce	ntration	(4) Last S	een	Young P	5) roduced	(6) Total
(1)	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
I.	Swans: Whistling swan	Cof the	resident of	reas, Broduc reas, Broduc reas produc	ed based o counts eb chestes ha	suld be se	ins are and representation of the same and t	suel coun or more are should b	a on repre-	
II.	Geese: Canada goose	15	10/13	50	10/10-30					50
	Cackling goose Brant		20.42				and Correct		Heliot I he	3.50
	White-fronted goose Snow goose Blue goose	19	10/13	100	e la la partira de la constanta de la constant	TORN HOLD	the Tuberva	Lugar ups	7.09	150
III.	Ducks: Mallard Black duck	a tires		10,000	And Waston	rl signiff		LORG TO C	w Asbert Print	12,000
	Gadwall Baldpate	Botomi II.		200	10/1-15	Liese Thec	da scomulita	T T P P P A Y P	n ellough be	150 250
	Pintail			1000	*					1500 50
	Green-winged teal Blue-winged teal Cinnamon teal			500 500			(5999)		- emany)	800
	Shoveller Wood duck			200	10/10-20	RICE ST	Citation Citation	po2 8.* 5.0	E THE	300
	Redhead Ring-necked duck			100	10/10-50					200
	Canvas-back Scaup Golden-eye Buffle-head			200 5 00	M Carbon	pergrap.	Line of	Cayou		300 700
	Ruddy duck		-	100		al ph som	ELSO OF SUR	BNC 1273	asza), (/ug0	100
IV.	Coots			300	10/1-15		th queues	DH1739	2122	500

3-1750 (July 1946)

(over)

SIMMARTES

Tota	l Production:	JORGANILLIA	a L a A
	Geese	Total wate	rfowl usage during period 17,150
I	oucks	Peak water	fowl numbers 13,500
(Coots	Areas us ed	by concentrations Entire water area
fi.			
		Principal	nesting areas this season
		The state of the s	
		NGC 11-99	Reported by Chesley M. Dinkins
	Commission cont		(Maintenance Man-General)
(2)	First Seen:	reporting period should be added in appropri given to those species of local and National The first refuge record for the species duri period, and the number seen. This column do	ng the season concerned in the reporting
(3)	Peak Concentra-	The greatest number of the species present i	n a limited interval of time.
(4)	Last Seen:	The last refuge percent for the species during period.	g the season concerned in the reporting
(5)	Young Produced:	Estimated number of young produced based on sentative breeding areas. Brood counts should of the breeding habitat. Estimates havi	ild be made on two or more areas aggregating
(6)	Total:	Estimated total number of the species using may or may not be more than that used for peof the migrational movement.	the refuge during the period. This figure eak concentrations, depending upon the nature

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

00 3-1751 Form NR-1A

(Nov. 1945)

MIGRATORY BIRDS (other than waterfowl)

RATORY BIRDS
than waterfowl)
Months of September to December 19/151 Refuge Lake Ile

(1) Species	(2 First		(3	3) umbers	Last		I	(5) Productio	n	(6) Total
Common_Name	Number	Date	_Number	Date_	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. Water and Marsh Birds:				00-01\0 08-65\0	8	9/10	İ		awk Lwo	Duck h
Common Loon Western Grebe White Pelican Double-crested Cormorant Great Blue Heron American Bittern Eared Grebe Sand Hill Crane			5 10 100 10 10 15 200 3000	9/15-30 9/20-30 9/10-20 9/10-30 9/10-30	200 8 4 8 10 8 10 8	10/13		dent d	Owl on's Kass agh-lagge Hesk s Falcon w Hesk	20 200 20 20 20 20 20 20 3500
V. Disting (Veller, Mar-Sun	by Cheshas									
				TIONS	INSTRUC	Somet to		aell .	1000	(1)
to the birds listed on	SI Kaltid addition		0.U. Ched	A sat mi "seagull"	as found terms as	Lenenes	the corre	spro .	pecies	(+)
II. Shorebirds, Gulls and	solving gn		darring th	a refuge	o galttag o	oe maioec		form		
Terns: M bas Isool 10	spocies		be given	on should	I attenti	Specie	te spaces	sing		
Killdeer Dus semiolization	mes to Ci		100	9/10-30	I. Shor	gadnoup	1ficance.	ngis		100
Greater Yellow-legs	eradrii Eq		200 300	ebirms, G	Dove III					300 400
Lesser Yellow-legs	Light		40	ace us Bi	IV. Pred					50
Dowitcher semical resears			80	10						50
Avocet	. boursec		20	aalwaga	d for the	100st edit	larst rel	enT :	irst Seen	50
Wilson's Snipe	In Invier		2000	9/10-30	the spec	to redmun	restest	eriT :e:	eak Number	4000
Marbled Godwit	THE PERMISSI		200	8/10-30	ando om	ro facinor	10010018	7111	Julian Apo	50
Wilson's Phalarope	. Den recho		200	speckes d	for the	biober eg	last refu	edT	ast Seen:	300
Willet			20	19						20
Black Tern Common Tern	nd actual						nated numi		roduction	500
bure company fortes	lng the p		ing the r	(over)	s edf lo	ge on I	nated tot	Esti	otal:	T (a)

(1)	(2)		(3)	(4)		(5)	(6)
I. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	Denunks	55	20 20	9/1-20	MIGR.		oll sisi	(8	50
(8)	F. S.				(3)	-(-5		(1)	
LateT nolfoubc	9	реп		81100	Peak Num	Sen	First	Species	
V. <u>Predaceous Birds</u> : Golden eagle	1 mole	9/23	3	12/1-80	Tedmul	Date	redmuk	emal nongo	0 4
Duck hawk Horned owl Magpie	1	9/10	3	10/10-30 10/20-30				and Marsh Birds	6 Tel S .I
Raven Crow Snowy Owl			300	9/10-80	1.00			Grabe Illonn Riveted Cornorau	500
Swainson's Hawk Am. Rough-legged Hawk Marsh Hawk		20.600	10	9/10-30	2.6 9 9			up Beren Littern	8 8 15
Prairie Falcon Sparrow Hawk	1	10/26	10	12/10-30	9001			I Graza	10
						Reported	by Chesley M	Dinkins (Maint	. Man-Ge

INSTRUCTIONS

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

Synthey Tollow-lare

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species-present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the reference during the period concerned.

3-1752 Form NR-2 (April 1946)

00

UPLAND GAME BIRDS

A THE PROPERTY OF STREET

Refuge Lake Ilo and District IV Easement Months of September to December , 19451 Refuges (3)(4) (1) (2) (5) (6) (7) Young Sex Density Removals Species Total Remarks Produced Ratio Number broods obs'v'd. Estimated Total For Research, For Restocking Estimated Hunting Pertinent information not Acres number Cover types, total per specifically requested. using List introductions here. Refuge Common Name acreage of habitat Bird Percentage LAKE ILO Ring-necked Pheasant 1M : 2F 150 The open season on pheasants Sharp-tailed Grouse 25 greatly reduced their numbers Hungarian Partridge 40 in this area. depun. HIDDENWOOD Dautos bas anoltsvasado noon besid besuborg annoy to Ring-necked Pheasant .Jatidad patheend svija 20 Sharp-tailed Grouse Hungarian Partridge obufoul .ofe , sinease iq , we drust blive of vir same applices pr LAKE PATRICIA Ring-necked Pheasant sal number in each category removed during the report per Sharp-tailed Grouse Hungarian Partridge being Jupar and gartub a wier and garau redmu birds plus those migrating into the refuge during cer LEGION LAKE Ring-necked Pheasant none rue at beveron sers one actial good entered to been bodd Sharp-tailed Grouse 20 20 or pertinent information not appointedly requested. Hungarian Partridge MOLEAN Ring-necked Pheasant * Only columns applicable will best od bluods berevoo beireg end Sharp-tailed Grouse Hungarian Partridge 40

Refuge Lake Ile and District IV Basement Months of

5-1752 Form NR-2 (April 1946

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- Applies particularly to those species considered in removal programs (public (2) DENSITY: hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this Pertinent information not information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
 - (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
 - (5) REMOVALS: Indicate total number in each category removed during the report period.
 - (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
 - (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

3-1752 Form NR-2 UPLAN (April 1946)

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UPLAND GAME BIRDS

Refuge Lake Ile and District IV Easement Months of September to December , 19451

					- ARTEN - MORREOS	Use correct.	CENTORIE (1)
(1) Species.	(2) Density		(3) Young Produced	Ratio	(5) Removals	(6) Total	(7) Remarks (8)
ai seas	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated	Percentage	15 1 E	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
PRETTY ROCK Ring-necked Phea	abcowbiand hardwoods Idlife Management Should be base and Survey method Remarks	d in Wi bmitted areas	ola liste igures av ve sample	dard type symb	be used when and counts o	1 10 10 10 10 10 10 10 10 10 10 10 10 10	
Ring-necked Pheas Sharp-tailed Grou	80		dya.	, fatidad ;	nibernd avitu	50	
Hungarian Partric	ge ebulani ebula eg	easants	urkey, pl		aming seliqua Idaliava li d		FOLTAN MES (7)
	ant olived droger ad	uring t	bevomen d	ach category	ni redmin is	10 20	(5) REMOVALS:
Hungarian Partri	ge skill könkseq ös könen paksab eguð	he repo	during t ting into	ng the refuge a those migrat	sal number us lent birds pl	10 1 50 mld 20	(6) TOTAL:
oefA	overed in survey.	area c ally re	ation and specific	stermine popular formation not	nod used to d	Indicate meth include other	(7) REMARKS:
			be	an ad bluoda i	oeriod covere	able to the p	* Only columns applic
1613							

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series

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^{*} Only columns applicable to the period covered should be used.

Refuge Year 19451

		Sport F		_Commercial	Fishing	Res	tocking **	Number re-	
Species	Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking	
Large Mouth Base* Bluegills* Crappies* Perch Wall-eyed Pike* Bullheads Suckers Carp* Catfish*	small ones abundant small ones common Minnows com a few adult	800 non,	4	ll these wer	e taken du:	5,000	(fingerlings) season of Decomen-days of fish)	lanted summer	

REMARKS: ** These species all winter-killed in winter of 1950-51.
Restocking done by N. Dak. State Game and Fish Dept.

Lake Ilo was tested in July of 1951 by the N. Dak. State Game and Fish Dept. to determine the extent of the winter kill. Only a few golden shiners (6" long), suckers (9-16" long), and perch (13" long) were caught. Large numbers of small perch and mirmows were found. It is believed that perch fishing will be very good in a short time (about 1953).

FISH

Refuge District IV Easement Refuges Year 194/51

	Sport Fi	ishing	Commercial	Fishing	Res	cocking	Number re-
Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking
	nons		none		none		nons
	1010		none		none		none
minnows numerous	none		none		none		none
suckers, min	none		none		none		none
minnows	none		none		none		none
					ds, suckers) winter killed	1. None were
				ullheads)	inter kill	ed. None were	reported
						*	
	minnows numerous suckers, minnows common It is belia	Relative Man days Abundance Fishing none none minnows numerous none suckers, minnows numerous none It is believed most of reported caught. It is believed most of	Abundance Fishing Taken none none minnows numerous none suckers, minnows numerous none minnows common none It is believed most of the fish(perceported caught. A few minnows It is believed most of the fish(se	Relative Man days Fishing Taken No. of Permits none none none none minnows numerous none none suckers, minnows none none minnows ocumnon none none It is believed most of the fish(perch, catfis reported caught. I few minnows were observed to the fish(suckers and here)	Relative Abundance Fishing Taken Permits Taken none none none none minnows numerous none none minnows numerous none none It is believed most of the fish(perch, catfish, bullhear reported caught. It is believed most of the fish(specers and bullheads)	Relative Man days Number No. of Pounds Number Stocked Abundance Fishing Taken Permits Taken Stocked none none none none minnows numerous none none none Tit is believed most of the fish(perch, catfish, bullheads, suckers reported caught. A few minnows were observed. It is believed most of the fish(suckers and bullheads) winter kill	Relative Abundance Fishing Taken Permits Taken Stocked Area Stocked none none none none none minnows numerous none none none minnows numerous none none none Tie believed most of the fish(perch, catfish, bullheads, suckers) winter killed reported caught. A few minnows were observed. It is believed most of the fish(suckers and kullheads) winter killed. None were

REMARKS:

3-1758 Form NR-8 (April 1946)

CULTIVATED CROPS

Permittee	e Br	Unit	0 0 0 0	Avg.	Permi	ttee's	- 10	Go			are or Retu	
(If farmed by refuge	Permit	or	Crops	Yield		are	Harve	ested	Unhary	rested	_	satory
personnel, so indicate)	No.	Loca- tion	Grown	per Acre	Acres	Bu.Har- vested	Acres	Bu.	Acres	Bu.		es, or Revenue
Tem Donohes Cherles Schollmeyer	18707	AU1,2	Wheat Barley Wheat	9	24	216	8	72 30	none of Luodis	none 120	15 acres	summer fallow
Ty Services or Cash Revenue - Stivits activity to Jupons edt, elilibrity to Jupons edt, elilibrity to the Service in the Service in the Petral is on a fee basis, else bestalt is on a fee basis.	i bewell to the number of the number of the number of the number of the crop	raised by refuge personnel and be bores or Refuge - Harvested - To Scholle or Bernal and be bores or tales and be bores or tales	the Bushels Harvested column. deed auch as that of sweet olove seed auch pounds may be shown. compared to bounds may be shown.	nwork ed bloom the common of ac	trairoqmi ai tI - etoA taq biel	peinifice or by refuge persons to be in the constant of the co	e smen to on Jino and ni be		ENJ TOORI PATTI TO THE STATE OF	.jroger eguler 18 redmesed s etsnages eejfimmed dose tail —	GLODE DELASTER OF WHITS GOTO	
Summary of Crops Grown:	TOT T		Acre		shels		Harves res	ted Bu.	Acre	arvested es l	d 3u . \$	al Revenue
20% hail damage	Wheat Barley		ACCRECATION INCOME		05	2 8 M	3	75 30	nor		20	

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

 $\underline{\text{Permittee}}$ - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the $\underline{\text{Permittee}}$ column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

 $\underline{\text{Crops Grown}}$ - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

<u>Permittee's Share</u> - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the <u>Acres</u> column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the <u>Bushels Harvested</u> column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the <u>Permittee's Share</u> column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

6/3

REFUGE GRAIN REPORT

(1) boling	(2) ON HAND	(3) RECEIVED	(4)	GRAIN DISPOSED OF				(6) ON HAND	HAND PROPOSED U		
VARIETY	BEGINNING OF PERIOD	DURING PERIOD	TOTAL	TRANS- FERRED	SEEDED	FED	TOTAL	END OF PERIOD	SEED	FEED	SUR
Wheat	ielled)—2	75	75	of trails	winge ha.	•	tiss. Then	75	mo)	75	-
Berley	•	30	30	A 2	Eth State	D 45 10 10	nd -glgar in	50		30	-
Speltz and Wheat (mixed)	191	on NR-9.	191	dw _uso! LilW ebd	i -eleker es, eleker	oque 'nic hus o ida	ny to eda	191	NO Y	191	•
-space,	transfer t	s dova le	ill source	most be	ineg peri	ub bevis	oes alang taevian to	lls tropet	181		
TOTALS	191	105	296	-	•	and	S edunios	296	(a)	296	-
**************************************						1	neuleJ gac	Column 4 1	(2)		
	a nin	loD nl be	rain list	lo seld	stray yd	nwobalaen	d besogore	inis is a	(7)		
			. gaivie	oet bas	gnlyglda		sie bacill	Mearest is	(8)		
			.ala ,"e	salifig s	adquar tes	aH" leg	ulen so be	note steds	(e)		
rred, data	stensit ni	erg to so	lishi.	all bags	ida aisig		os out ers	d ejaolbal	(01)		
(8)	Indicate s	hipping o	r collecti	on point	s						
(9)	Grain is s	tored at	Lake	Ile			7				

NR-8a REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lbs., Corn (ear)—70 lbs., Wheat—60 lbs., Barley—50 lbs., Rye—55 lbs., Oats—30 lbs., Soy Beans—60 lbs., Millet—50 lbs., Cowpeas—60 lbs., and Mixed—50 lbs. In computing volume of granaries, multiply the cubic contents (cu._ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.
- (4) A total of Columns 2 and 3.
- (6) Column 4 less Column 5.
- (7) This is a proposed breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3-1760 Form NR-10 (April 1946)

HAYING AND GRAZING

Refuge lake 110 Year 19/451

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Har- vested	Period of Use From - To	Rate	Total Income	Remarks
HAYING Tom Donohoe	76	HU1,2,3	40		28	7/15-11/15	1.00	23.00	
Grover Odren	78	HU6,7	10		5	N		5.00	
G. W. Soarles	75	HU5	15		10		n	10.00	
Charles Schollmey	er 79	HU4	none		none		n	5.00	
GRAZING		7			5			3	
Louis Saetz	77	GU8	45	30		7/15-10/15	0.50	15.00	

Totals:

Acreage grazed.....45

Animal use months 50

Total income Grazing 15.00

Acreage cut for hay 65

Tons of hay cut 38

Total income Haying 43,00

LAKE ILO REFUGE

I. GENERAL

A. Weather Conditions.

Precipitation was below average for May and June while the amount received in July and August was above average. The month of May was considered very dry and cold; several killing frosts occurred during the month - the latest on May 27. June was cooler than normal and very dry. July and August were cooler than usual. There were two hail storms in this vicinity on August 16 and 20. There has not been a frost in August which is unusual.

		Weath	er Data Tabulat	ion
		6	Temp	erature
Year	Month	Precipitat		
1951	May	0.64	86	23
	June	2.02	84	35
	July	2.78	98	52
	August	2.78	100	29
	Total	8.22	Extremes 100	23
1950	May	3.93	83	26
	June	4.31	91	30
	July	0.72	97	38
	August	0.83	91	29
	Total	9.69	97	2.6

B. Water Conditions.

The lake level was two inches above spillway crest at the beginning of the period. By May 10 only a very small stream was flowing over the spill, and from that date to the close of the period the water level receded to 14 inches below the spillway crest.

C. Fires.

No fires during the period; the above normal precipitation in July and August greatly reduced the fire hazard.

II. WILDLIFE

A. Migratory Birds.

1. Populations and Behavior.

The populations of all migratory birds showed a decrease from 1950 for the months of May, June and July. It is believed that the numbers present in August were equal to those of last year. A brood

count was made on July 26 and re-checked several times. 66 broods were recorded. The brood count for 1950 showed 128, 1949 - 206, and 1948 - 200 broods.

The estimated population in early July was 4500, and in August it was 10,000. The population consisted of approximately 2000 Blue-winged Teal, 4000 Mallards, 3000 Pintails, and 1000 other ducks, mainly Gadwall, Shoveller and Baldpate. Five Green-winged Teal were seen on August 31. An estimated 2000 Coot were using the refuge in the latter part of August.

It is believed that fewer shorebirds used the area than in the past. The estimated 2000 shorebirds that used the area during the period included Wilson's Phalaropes, Yellow-legs, Willets, Killdeer, Avocets and Spotted Sandpipers. White Pelicans were present throughout the period; 40 were counted on August 31. Great Blue Herons were present in fewer numbers than usual.

2. Food and Cover.

Food and cover conditions were the best that have ever been observed on the area.

B. Upland Game Birds.

It is estimated that 100 Ring-necked Pheasants were using the refuge at the beginning of the period. Since then very few broods or adult pheasants have been seen on the refuge or in the surrounding vicinity. It is the opinion of refuge personnel that the pheasant population is smaller than that of last year, that also seems to be the general opinion of farmers in the vicinity. The Dunn County Wildlife Federation and other Wildlife organizations in this area believe that there are more pheasants than usual. Most of them have gone on record to that effect. It is believed that most of the hunters are going to be disappointed when the season opens in this area on October 5.

It is estimated that Sharp-tailed Grouse are present in approximately the same numbers as last year. Five adult sharp-tails and one brood have been observed in the vicinity.

One brood of 10 Prairie Chickens were observed about 20 miles northeast of the refuge.

A few Hungarian Partridge have been seen on the refuge and in the surrounding vicinity during this period. It is believed that their numbers are about the same as last year (which was considered normal).

C. Big Game Animals.

No big game animals have been observed on the refuge. A few white-tailed deer have been observed in the nearby vicinity; 14 antelope have been observed eight miles north of the refuge.

D. Fur Animals, Predators, Rodents and other Mammals.

No mink have been observed on the refuge this period, although some sign has been observed. It is believed that their population is about the same as last year.

More weasels have been seen this period on the refuge, and in this vicinity, than at any time since the refuge was established.

The muskrat population appears to have decreased from last year even though none were harvested in 1950. It is estimated that from 200 to 300 are using the area.

No coyote or fox have been observed on the refuge. It is believed that their numbers are very low.

A few signs of beaver have been observed on the refuge during the period. It is believed that one or two have been present. Very little damage has been done to the trees however.

Skunks are numerous on the refuge and in the vicinity.

F. Fish.

As reported in the last narrative report, most of the fish winter-killed in Lake Ilo during the past winter.

Test nettings were made in the lake on July 24 and 25 by the North Dakota State Game and Fish Department to determine the extent of winter-kill and to find out what species of fish were still present. Nets were set for two days and nights. A 250-foot gill net and a 25-foot trammel net were used. The following fish were taken:

250-foot gill net - 66 golden shinners, six to eight inches long; three perch, eight, nine and $11\frac{1}{2}$ inches long; and four suckers, each 12 inches long.

25-foot trammel net - one perch 13 inches long; three golden shiners, each six inches long; and 47 suckers, eight to 16 inches long.

A 75 x 6 foot minnow net was used on many parts of the lake in short drags along shore. 50 to 10,000 small perch, $l_{\mathbb{Z}}^{\frac{1}{2}}$ to $l_{\mathbb{Z}}^{\frac{1}{2}}$ inches, were taken each time and a large number of minnows (suckers, chubs and shiners). No other game fish were found, and no carp, catfish or bullheads were found.

During the latter part of July and the first part of August a number of schools of small bullheads were seen in the lake.

It is believed that there are more small minnows in the lake than there have been for several years. It is possible that perch fishing will be good for a few years when they attain sufficient size, but it is also

possible that they will become over-populated in a very short time.

Sometime in the early part of August 10,000 wall-eyed pike were planted in Lake Ilo by the State Game and Fish Department. Mr. Dinkins, Maintenance Man at Lake Ilo, was not informed that plans had even been made for this planting, and was not around when it was done. We will have to inform the State Department that we would appreciate their notifying us of their plans for re-stocking refuge waters.

A large number of fishermen were on the lake during the first few days of the fishing season; they continued to try to fish for approximately six weeks. No fish were caught that we know of. Some of these fishermen came from a distance of 200 miles and were very disappointed with the lack of fish.

III. REFUGE DEVELOPMENT - MAINTENANCE

A. Physical Developments.

The following maintenance and construction projects were completed during the period.

- 1. Completed construction of barnyard fence at headquarters.
- 2. Completed construction of new refuge boundary fence on the west line of the Sw1 of Section 29. Removed old fence.
- 3. Cleaned up around spillway and removed some forms that were left on last winter. Returned borrowed steel culverts to county.
- 4. Installed electric stove in Ilo residence.
- 5. Installed electric water heater.
- 6. Painted outside of buildings at headquarters, re-puttied windows (small garage completely painted, green trim put on other buildings, and approximately 50% of residence painted).
- 7. Built concrete approach in front of large garage at headquarters; filled in around approach with scoria.
- 8. Mowed weeds on refuge roads.
- 9. Checked and repaired refuge markers.
- 10. Repaired fence where damaged by car running into it.
- 11. Assisted State Game and Fish Department in making test nettings of fish in Lake Ilo.
- 12. Made brood count on Ilo July 26.
- 13. Made minor repairs on Diamond-T truck, IHC pickup, and other Government-owned equipment.
- 14. Cultivated ground for trees that are to be planted next spring.

B. Plantings.

Cultivated Crops.

No crops were planted by refuge personnel. The following crops were planted by share-croppers:

Tom Donahoe, Permit No. 18707--32 acres of wheat. Thirteen acres of corn were to have been planted; but, due to the late spring, the ground was summer fallowed. A share of the wheat is to be taken by the refuge;

not delivered to date but harvested; 25% hail damage occurred on this crop.

Charles Schollmeyer, Permit No. 18706--42 $\frac{1}{2}$ acres summer fallowed; $42\frac{1}{2}$ acres of barley and wheat were planted. The refuge share was four acres harvested with the balance left standing--this was completely hailed out on August 16 but will still make good bird food. Approximately half of the wheat was also damaged by hail; the other half of the wheat had been harvested before the hail storm.

IV. ECONOMIC USE OF REFUGE.

- A. Grazing. One grazing permit is in effect at the present time.
- B. Haying. Four haying permits were issued to neighboring farmers. 50% of the hay has been harvested to date.
- C. Other Uses. None.

V. FIELD INVESTIGATION OR APPLIED RESEARCH.

None.

VI. PUBLIC RELATIONS.

A. Recreational Uses.

The recreational area was again under the management of the Dunn County Park Board under a cooperative agreement with the Service. They have cultivated trees, mowed grass, and have kept the picnic grounds in good shape. Lights were installed at the swimming beach on June 15 and have been in use during the remainder of the report period.

10,000 wall-eyed pike were stocked in Lake Ilo according to the Killdeer Herald, county paper; but no official noticication has been received from the State Game and Fish Department.

BASEMENT REFUGES - DISTRICT IV.

HIDDENWOOD

I. GENERAL.

Precipitation for this area was below normal for the period. Fair crops were produced. Water levels were higher than normal at the beginning of the period and have remained favorable.

II. WILDLIFE.

Very few birds have been observed on the area during the summer months. When visited on July 23 a brood count was made - only 5 broods of ducks were recorded, and only a few adult ducks and six coot were observed but it is believed that a number of migratory birds used the area during August.

No upland game birds were observed, but we believe a few Pheasant, Sharp-tailed Grouse and Hungarian Partridges are using the area.

In the past this lake was completly covered with bullrushes, only a few are present this year, and they are along the shoreline. Very few other aquatic plants were present.

The muskrat population appears to be very small compared to other years. A few mink signs were observed and it is believed a small number are using the refuge.

III. PHYSICAL DEVELOPMENTS.

1. Brood counts and wildlife observations.

LAKE PATRICIA

I. GENERAL.

Rainfall was above normal during the period. Very good crops were harvested in this vicinity. Water levels were higher than normal. Water was 10 inches below spillway crest on July 18.

II. WILDLIFE.

A brood count was made on July 18 and 12 broods were recorded. This is a smaller brood count than usual. Very few blue-winged teal were observed in this vicinity. The total waterfowl usage was below records of the past.

No Pheasants were observed when visited on July 18 and their numbers are very low compared with the past. No Sharp-tailed Grouse or Hungarian Partridges were observed and it is believed a few are using the area.

III. PHYSICAL DEVELOPMENTS.

- 1. Brood counts and wildlife observations.
- 2. Checked structures and markers.

LEGION LAKE

I. GENERAL.

Rainfall was below normal during the entire report period. The water level has remained very good. A small amount of water flowed over the spillway the first part of May - and has receded to approximately 12 inches below spill crest at the close of the period. Crops were very poor in this vicinity. The prairie grass was as brown as in the fall when the area was visited on July 23.

II. WILDLIFE.

Thirty broods were recorded on the count of July 23. The following birds were observed. Killdeer - 20, Willet - 30, Avocet - 6, Great-Blue Heron - 2, White Pelican - 2, Spotted Sand Piper - 12, Yellow-Legs - 40, Black-Crowned Night Heron - 3, and 4,000 gulls were observed on a small island in the lake.

No Pheasants were observed using the area but it is believed that a few are present, possibly more than there have been for several years. A number were seen in the vicinity of the refuge. No Sharp-tailed Grouse or Hungarian Partridge were observed on the refuge but a few were seen in the surrounding vicinity and we believe a few are using the refuge.

III. PHYSICAL DEVELOPMENTS.

- 1. Brood counts and wildlife observations.
- 2. Structures and markers checked.

McLEAN

I. GENERAL.

Precipitation was below normal for the first three months and above normal for the last month of the period. Poor crops were harvested in this vicinity. A small flow of water was going over the spillway in May and it was 6" below spillway crest on July 23. The water is believed to be approximately 12" below spill crest at the close of the period.

Bullrush stands appeared to be the best since the refuge was developed. This plant makes excellent cover for this area.

II. WILDLIFE.

A brood count was made on July 23 and nine broods were recorded. Due to the good cover on this area it is believed that more broods were present than the number recorded. The usual number of shore birds were also present.

A number of muskrats were observed and their numbers are greater than normal. A few signs of mink were observed.

No upland game birds were observed during the date of the brood count, but a few Sharp-tailed Grouse and Hungarian Partridges are believed to be using the area.

III. PHYSICAL DEVELOPMENTS.

- 1. Brood counts and Wildlife observations.
- 2. Structures checked and water level noted.

PRETTY ROCK

I. GENERAL.

Precipitation was above normal for the entire period. Crop yields were above average. Water level has been very good during the report period. A small amount flowed over the spillway during most of May and during the remainder of the period the water level was only a few inches below the spillway crest. On August 23 the water level was checked and found to be 10 inches below crest.

II. WILDLIFE.

A brood count was made on July 18 and 28 broods were observed, which is 11 less than last year. Seventy five adult and 8 broods of eared grebe were recorded. Twenty two male ruddy ducks were also observed on this date. The area was again visited on August 23 and the following wildlife was recorded. Mallard - 700, Pintail - 2,500, Blue-winged teal - 50 adult & three small broods, Shoveller - 200, Baldpate - 600, Gadwall - 20, Ruddy - 8, Coot - 300, Eared grebe - 100, Yellow Legs - 200, Great Blue Heron - 2, Killder - 20, Avocet - 5. It is believed the fall migrant waterfowl population increased some after this date.

Two broods of Pheasants were observed on the refuge on July 18 and one brood on August 23. The Pheasant population is believed to be smaller than last year as the farmers in this vicinity informed that they had observed very few this summer.

No Sharp-tailed Grouse or Hungarian Partridge were observed on the refuge this period but it is believed a few are using the area. A small number have been observed in the vicinity during the period. According to signs, the mink and muskrat population is about the same as for last year.

III. PHYSICAL DEVELOPMENTS.

- 1. Completed repairing spillway, 36 lin. ft. of 3" wakefield piling, 6' long were placed across spillway and a concrete cap 1'6" x 1'6" 36 was poured on piling.
- 2. Brood counts and wildlife observations made.
- 3. Checked refuge markers.

Repair of spillway as follows:

- 1. Hauled piling, cement, 1 cu.yd. sand and 3 cu. yds. gravel from Lake Ilo to job.
- 2. Placed 6' wakefield piling across spillway.
- 3. Poured concrete cap 18"x18" x 36'.
- 4. Rented cement mixer and returned same.
- 5. Expended 50 man-hours labor.

STEWART LAKE

I. GENERAL.

Precipitation was above normal for the period. Crops were very good in this vicinity. The water level was very good this period. A small amount passed over the spillway in May and June, but receded to 12 inches below spill crest by July 17. The area has not been visited since that date but the water level should be about the same or possibly higher as there has been a good amount of rainfall in this vicinity in August.

The spillway appears to be about the same as it did this spring. This spillway was damaged by the spring run-off in 1950.

II. WILDLIFE.

The area was visited for brood count and inspection on July 18. Nine broods of ducks were recorded and 85 adult ducks, 200 shore birds were observed. It is estimated that 3,000 to 4,000 ducks were present on the refuge the latter part of August but the area was not visited at that time.

No Pheasants were observed on the date the brood count was made but it is believed a few Pheasants, Sharptailed Grouse and Hungarian Partridges are using the area. There should be more than last year due to the mild winter, but I was informed by some of the local farmers that very few have been seen this summer.

A few signs of muskrat and mink were observed on the area but none seen. It is estimated that approximately the same number are present

on the refuge as last year. Signs of skunk were numerous and their numbers have increased over last year.

III. PHYSICAL DEVELOPMENTS.

- 1. Brood counts and wildlife observations.
- 2. Boundary markers and structures checked.

WHITE LAKE

I. GENERAL.

Precipitation was above normal for the report period. Crops are very good in this vicinity. The water level has been higher than normal during the report period. The water level was approximately level with spillway during the period. A small amount ran over the spillway off and on during most of the period. When visited on July 17, the water was 2 below spillway crest.

II. WILDLIFE.

A brood count was made on July 17 and 11 broods were recorded. This is 9 more than a year ago. The following birds were observed on this date: 75 adult ducks including mallard, pintail and baldpate; 30 killdeer, 7 avocets, 6 willets, 15 eared grebe and 25 coot.

No ring-necked pheasants, sharp-tails or "Huns" were observed but it was reported by farmers in this vicinity that a few had been seen on the refuge and in the surrounding locality during the period.

A few mink and muskrat signs were observed. Their numbers are believed to be a little smaller than last year, but a few are using the area. Skunks are numerous on the refuge.

III. PHYSICAL DEVELOPMENTS.

- 1. Brood counts and wildlife observations.
- 2. Structures and water levels checked.

NCTE: The above report on Lake Ilo and the District IV Easement Refuges was prepared largely on data supplied by Mr. Chesley M. Dinkins, Maintenance Man (General).

DISTRICT IV EASEMENT REFUGE BROOD DATA

		Number	Number
	Species	of	of
	MARKET - Company of the Company	Broods	Young
1. Lake Ilo	Mallard	16	104
	Gadwall	2	14
	Baldpate	10	64
	Pintail	19	116
	G.W.Teal	-	_
	B.W. Teal	-	-
	Shoveller	17	108
	Coot	2	8
	Total	66	414
2. Hidden Wood	Mallard	3	19
	Pintail	-	
	Ruddy	2	11
	Unidentified	1	5
	Total	6	35
3. Lake Patricia	Mallard	3	19
	Gadwall	11	7
	Baldpate	î	6
	Pintail	1 3	18
	B.W.Teal	4	27
	Total	12	77
4. Legion Lake	Mallard	10	65
	Baldpate	5	32
	Pintail	3	18
	B.W. Teal	6	41
	Shoveller	6	38
	Total	30	194
5. Lake McLean	Mallard	3	19
	Pintail	4	24
	Shoveller	2	13
	Total	9	56
6. Pretty Rock	Mallard	6	39
	Gadwall	6	7
	Baldpate	5	32
	Pintail	-5	31
	B.W.Teal	6	41
	Shoveller	5	32
	Total	28	182

EASEMENT REFUGE BROOD DATA (Continued)

	Species	Number of Broods	Number of Young
7. Stewart Lake	Mallard	3	19
	Pintail	3	18
	B.W.Teal	3	20
	Total	9	57
8. White Lake	Mallard	3	20
	Pintail	3	18
	B.W.Teal	2	14
	Shoveller	3	19
	Total	11	71
	Grand Total	171	1086

The number of young is based on the average brood size given in the May circular on Waterfowl brood counts.

The total production for Lake Ilo and Easement Refuges in District IV was 171 broods and 1086 young; in 1950 there were 193 broods and 1191 young; in 1949 there were 252 broods and 1630 young.

REFUGE Lake Ile WATERFOWL MONTHS OF May to August , 1951

(1) Species	(2) First Migrants	Seen Peak Conc			4) rants Seen	Voline	(5)	(6) Total
Common Name	Devised by	te Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
<u>Swans</u> : Whistling swan	Estimated nu sentative bi		oduced bas rood count			nd actua	counts on ore areas ag	
C. Geese: Canada goose Cackling goose	The last rea	fuge record for t	ne species	during th	s season o	oncerned		rting
BrantWhite-fronted goose		t number of the s	7					
Snow goose Blue goose		sfuge record for the number seen.					d in the <mark>rep</mark> at species.	orting
Mallard Black Duck Gadwall Baldpate Pintail	reboreme by	100 1000 3000	8/20-31	propriate.	pecies odd spaces. S nificance.	16 2 10 19	350 30 100 200	150 1200 4000
Green-winged teal Blue-winged teal Cinnamon teal		2000	**	Repo	rted by	0	200	20
Shoveller Wood duck		500	10)			17	220	500 √
Redhead Ring-necked duck Canvas-back Scaup	none seen		Prin	cipal nest	ing areas	this sea	son	
Golden-eye Buffle-head Ruddy duck	***************************************	40		waterfowl s used by	numbera	5 fons	5	40
Gease					il usage du	ring per	7 oq	
1. <u>Coot</u> :		2000	M			2	5	Form NR-

SUMMARIES

Lon	SUMMATES
Total Production:	2000 FORM-NR-
Geese	Total waterfowl usage during period
Ducks	Peak waterfowl numbers
Coots	Areas used by concentrations
	Principal nesting areas this season
	200 4 71 72 700 4
	Reported by
Green-winged teal	
parobace	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

REFUGE Hidde ood MONTHS OF May to August , 19 51

Species		grants Seen	Peak Conc	entration	Last Migr	cants Seen	Young	(5) Produced	(6) Total
Common_Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
L. Swans: Whistling swan	sentat	tve breeding	gareas. B	rood count	should b	nade on presie in	(wo or m	pre areas ar	regating
C. Geese: Canada goose Cackling goose Brant								in the repo	
White-fronted goose Snow goose Blue goose	period	, and the n	Imber seen.	This col	umn does n	ot apply t	o reside		
3. <u>Ducks</u> : Mallard Black Duck Gadwall Baldpate Pintail	In add report given	ttion to the Ing period	10 50	8/20-3				30 Le 144 e qui.	
Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck			100	98	Repo	rted by		20	100
Redhead Ring-necked duck Canvas-back Scaup Golden-eye		•	20	*	cipal nest			son	30
Buffle-head Ruddy duck - Unidentified			26	Peak	waterfowl s used by	numbers	2	20 5	25
1. Coot:			200	Tota	l waterfow	l usage du	ring per	20	Ecom NR-1

SUMMARIES

Total Production:	200			\$65m NK-			
Geese		Total waterfowl usage during p	eriod				
Ducks	22	Peak waterfowl numbers	8	-			
Coots		Areas used by concentrations					
	20	Principal nesting areas this s	eason				
	20						
Green-winged teal Blue-winged teal Cinnamon teal	200	Reported by	50	700			
Ealdpate Pintail	INS	TRUCTIONS	100	\$00 \$0			
(1) Species:		d on form, other species occurring ed in appropriate spaces. Special and National significance.					
(2) First Seen:		e species during the season concer This column does not apply to resi		orting			
(3) Peak Concentration:	The greatest number of the spe	cies present in a limited interval	of time.				
(4) Last Seen:	The last refuge record for the period.	species during the season concern	ed in the repor	rting			
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.						
(6) Total:		species using the refuge <u>during the</u> at used for peak concentrations, de					

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Lake Patricia

WATERFOWL
MONTHS OF May to August , 19 51

59

REFUGE___

(1)		2) grants Seen	(3 Peak Conce			4) rants Seen	Voun	(5) g Produced	(6) Total
Species	FIRST WIL	grants seen	_reak_conce	entration	Last Wing		Broods	Estimated	Estimated
Common Name	Number	Date	Number	Date	Number	Date	_Seen_	Total	for Period
1. <u>Swans</u> : Whistling swan		red numbér		oduced bas rood dount			nd actua	L counts on pre areas ag	repre- gregating
2. <u>Geese</u> : Canada goose Cackling goose	The la		scord for t	ie apecies	during th	e sesson o	oncerned	in the repo	rting
BrantWhite-fronted goose Snow goose	Berrod	, and the n	naber seen.	This col	mm goes u	ot apply to	o reside	at apecies.	
Blue goose	The fi	rat refuge	record for	the apocie	s during t	ne season	poncerne	d in the rep	orting
3. <u>Ducks</u> : Mallard Black Duck	THE STATE OF THE	ing period to those sp	should be a	6/20-31	gropriate		8 9 9	con 40 m spo	
Gadwall Baldpate	In add	ttion to th	3 0	ted %n for	n, other s	apecias occ	1	20	100
Pintail			800	NSTRUCTION			8	40	800
Green-winged teal Blue-winged teal• •			100	8/20-30	Repo	orted by	4	50	150
Cinnamon teal Shoveller Wood duck			100	•		3	one seen	80	100
Redhead Ring-necked duck Canvas-back				Prin	cipal nest	ing areas	this sea	30u	
Scaup Golden-eye Buffle-head				Area	yd besu e	concentrat	ions		
Ruddy duck				Peak	waterfowl	numbers_			100
Geese				Tota	l waterfor	al usage du	ring per	lod	
4. Coot;			100	•			None	20	100 Form NR-1
(June 1949)				(over)	3				

SUMMARIES

Metal Desirations	SOMMANIES
Total Production:	Mone 20 Form NR-1
Geese	Total waterfowl usage during period
Ducks	Peak waterfowl numbers
Coots	Areas used by concentrations
	Principal nesting areas this season
	700 "
Crumanian cont	Reported by
Green-winged toal	
Baldpute	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Legion Lake

REFUGE

9

(June 1949)

MONTHS OF MAY

to August

19 51

(2) (3)(1)(4)(5)(6) Species First Migrants Seen Peak Concentration Last Migrants Seen Young Produced Total Broods Estimated Estimated Common Name Number Date Number Date Number Date Seen Total for Period LOOG CORES 1. Swans: of young produced based on observations a ESTIMSTED DUMBET Whistling swan 2. Geese: The last refuge record for the species during the season opnoarmed in the reporting Canada goose Cackling goose Brant ____ The greatest number of the species prement in a limited interval of time. White-fronted goose Snow goose o resident species. period, and the number seen. This colimn does not apply t Blue goose the species during the season poncerned in the reporting The first refuge record for Eiven to those specie 200 reporting period should be 3. Ducks: Lional significance 8/20-81 10 Mallard 800 abadea Black Duck In addition to th Gadwa11 None Seen 100 50 200 V Baldpate 5 Pintail 100 3 200 Green-winged teal 49 Blue-winged teal . 100 Reported by Cinnamon teal Shoveller 200 100 800 Wood duck Redhead Principal nesting areas this season Ring-necked duck 30 / Canvas-back 20 Hone Seen Scaup Golden-eve Areas used by concentrat Buffle-head Ruddy duck 20 Mone Seen 10 20 Waterfowl numbers waterfow I usage during pented 200 Form NR-1 4. Coot: 3-1750

(over)

SUMMARIES

wn.		OUMMARIES	
Total Production:			
Geese	200	Total waterfowl usage during period	
Ducks		Peak waterfowl numbers	
Coots		Areas used by concentrations	
	80	Principal nesting areas this season	
			200
Slue-winged teal * *	**********	Reported by	
srean-winged teal			
Baldpate .	INS	STRUCTIONS	200 /
(1) Species:		ed on form, other species occurring on refuge during ded in appropriate spaces. Special attention should all and National significance.	
(2) First Seen:		ne species during the season concerned in the report This column does not apply to resident species.	ting
(3) Peak Concentration:	The greatest number of the spe	ecies present in a limited interval of time.	
(4) Last Seen:	The last refuge record for the period.	e species during the season concerned in the reporti	ing
(5) Young Produced:	sentative breeding areas. Bro	duced based on observations and actual counts on repood counts should be made on two or more areas aggree Estimates having no basis in fact should be omitted	gating
(6) Total:		species using the refuge <u>during the period</u> . This fat used for peak concentrations, depending upon the	

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Lake Molean Months of May to August 19,51

	(1) Species	(2) First		Peak Conce		(4) Last S	Seen	Young Pr		(6) Total
. (e)	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I.	Swans: Whistling swan	stantee n stantive t f of the	pused ros padry prist w principal	sourg production Broom	ed based of beimbs significants and beimptes in the beimptes i	positive in the property of th	b chis and a site on two spis in feo	chal count or more are should be	as aggragat as aggragat amitted.	205
II.	Geese: Canada goose Cackling goose	e last re riod.	unie beeg	ed for the	pecies dum	artik epe gara	araqt dobts	med in the	reporting	
	Brant	e (luospee	g vamper.	of the apex	es busconti	in a Us	ed interve	al of bine.		
	Blue goose	o first r	ope nump	of Sport I	ro aujmin	the soft	by co'te	aldent ape	res*	79
III.	Ducks: Mallard Black duck	wen to th		400	8/20-51	al signifi		8	50	400 1
	Gadwall Baldpate Pintail Green-winged teal	addition porting p		10 50 100	***	pitar apeci	ne committee	Le au Le Le	20 50	100
	Blue winged teal			. 100				None Seen	25	100 2
	Cinnamon teal Shoveller Wood duck Redhead	7 1 2		100	•	Emborgo.	p2.	2	80	100
	Ring-necked duck Canvas-back Scaup Golden-eye			20	Penatr	nes ting	PLANE ERI	9445011		20
	Buffle-head Ruddy duck				y2.496 11		. LULLINE DES			
IV.	Coots			100	\$105 JC 1891	control to	e se gmyns	betrog		200

3-1750 (July 1946)

(over)

Form NR-1

SUMMARTES

Tota	1 Production:	301	REPUTER				
In'	eeseucks	- T00	40	aterfowl usage durin	g period		200
C	oots		Areas u	sed by concentration	s	1	
			Princip	al nesting areas thi	s season		34
	Motor sack goodstyet gransport seet			Reported by	2	čã	TO
			10		The Section	58	700
(1) (2)	Species: First Seen:	In addition to the birds listed reporting period should be added given to those species of local. The first refuge record for the period, and the number seen. The state of the period	on form, d in approand Nation	priate spaces. Spec nal significance. uring the season con	ial attention	should be	Ð
(3)	Peak Concentra-	The greatest number of the spec	ies presen	t in a limited inter	val of time.		
(4)	Last Seen:	The last refuge peceed for the speriod.	species du	ring the season conc	erned in the	reporting	
(5)	Young Produced:	Estimated number of young productions sentative breeding areas. Brook 10% of the breeding habitat. Estimated number of young productions are sentative breeding areas.	d counts s	hould be made on two	or more area	as aggrega	
(6)	Total:	Rstimated total number of the sp may or may not be more than that of the migrational movement.					

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Pretty Rock Months of No. to August 19 51

(1) Species		(2) First Seen			(3) Peak Concentration		(4) Last Seen		oduced	(6) Total	
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period	
I.	Swans: Whistling swan	Retimate sentativ	d mmber a breedt	of young pr g areas. B	rood count	a aponje pe	made on	d actual c	eress agg	pre- legating	
II.	Geese:	period .									
	Canada goose Cackling goose Brant		refuge	ecord for t	ne species	during the	season oc	ncerned in		gue .	
	White-fronted goose Snow goose Blue goose			er of the s		10018 2 8		× 1 × 2			
			and the 1	record for unber seen.	This col	during th					
II.	Ducks:	White of Y was	S. mastrane	mounty, for			SHEROW F	minermed 1		ting	
	Mallard	given to	ppoas el	1,000	8/20-31	gopsi sign	ficance.	6	80	1,500	
	Black duck Cadwall	reportin	E berroq	amonia pe a	ded in ap			solal atte		d be 7	
	Baldpate	In addito	Lon to ti	600	sed on for	s, other sp	cies occu	France on 2	20	50 1	
	Pintail			2,800	inotate va			5	60	5,000	
	Green-winged teal	-			HULLUNG.	-			00	0,000	
	Blue-winged teal Cinnamon teal			• • 400		Reported by		8	80	800	
	Shoveller			200				5	70	200 🗸	
	Wood duck	1	7			\			10	200	
	Redhead	1					-		-		
	Ring-necked duck										
	Canvas-back Scaup				Princ	pel nesting	areas th	de senson			
	0-33										
	Buffle-head	preed gou	TCD.								
	Ruddy duck	-		30		meg pl. co	CHARACTA	Hone See	20	80 /_	
					VANOR	mady jan do	American 44 c				
137	no or Marer Towl area	opvered		800	Loux	steriow m	appais -				
IV.	Coot:			800		matewioni,	1			500 7	

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(200 x 1020) Inpelior - Dublicating pechian machineton Survaries

Dates waterfowl counts made		Total waterfowl usage dur	ing period _		
Percent of waterfowl area of	covered	Peak waterfowl numbers		1111-4	800
Dates brood counts made		Areas used by concentration	ons	190	
Percent of area covered in	brood counts				
Total production:		Principal nesting areas t	his season _		
Geese					
Ducks	300	н		.40	200
Coots		Reported by		- 23	
Pintati Gran-pingod 1992	INSTRUC	CTIONS	. 2	00	8,000
(1) Species:	In addition to the birds listed reporting period should be added given to those species of local	ed in appropriate spaces. S	pecial atten	fuge durintion shoul	ng the
(2) First seen:	The first refuge record for the period, and the number seen.				rting
(3) Peak concentration:	The greatest number of the spec	cies present in a limited in	terval of ti	me.	
(4) Last seen:	The last refuge record for the period.	species during the season c	oncerned in	the report	ting
(5) Young produced:	Estimated number of young produce sentative breeding areas. Brook of the breeding habitat.	od counts should be made on	two or more	areas aggi	regating
(6) Total:	Estimated total number of the smay or may not be more than the of the migrational movement.				

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Stewart Lake Months of May to August 19 51

(1)(2) (3) (4) (5) (6) Peak Concentration Young Produced Species First Seen Total Last Seen Broods Estimated Estimated Common Name Mumber Date Number Date Number Date Seen Total for period I. Swans: Whistling swan II. Geese: Canada goose The Last Lacord Tot the apectes during the season cancerned in the reporting Cackling goose Brant White-fronted goose The greatest number of the s pactes present in a l mitted int Snow goose Blue goose and the This column does no The Liber reluge he specta Ducks: III. Mallard 8/20-31 1,200 32 1,500 / Black duck Gadwall. Hone Seen Baldpate 200 Pintail. 800 1,000 Green-winged teal Blue-winged teal . -1,000 88 1,500 Cinnamon teal Shoveller 50 None Seen 100 Wood duck Redhead Ring-necked duck Canvas-back Principal nesting areas th Scaup Golden-eye Buffle-head Ruddy duck mag ph concentiatio IV. Coot: 200 Hone Seen 200 207. 33 relion, usege during period

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(3eb (1320) juperior - Dubitoneius Georges Resultus Dubitoneius

Dates waterfowl counts made		Total waterfowl usage dur	ing period		
Percent of waterfowl area c	overed	Peak waterfowl numbers	Yoae Sean	MONTE	890
Dates brood counts made		Areas used by concentrati	ons		
Percent of area covered in	brood counts				
Total production:		Principal nesting areas t	his season		
Geese					
Ducks	90	14.	1000 8000		708
Coots	F F S F F F F F F S 72000	Reported by		20 AN	-53.00
Pineni	INSTR	UCTIONS		40	3,000
(1) Species:	In addition to the birds listereporting period should be addition to those species of local	ded in appropriate spaces. S	pecial attent	uge durin ion shoul	d be
(2) First seen:	The first refuge record for the period, and the number seen.				ting
(3) Peak concentration:	The greatest number of the spe	ecies present in a limited in	terval of tim	e.	
(4) Last seen:	The last refuge record for the period.	e species during the season of	concerned in t	he report	ing
(5) Young produced:	Estimated number of young prosentative breeding areas. Br 10% of the breeding habitat.	ood counts should be made on	two or more a	reas aggr	egating
(6) Total:	Estimated total number of the may or may not be more than the of the migrational movement.				

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge White Lake

Months of_

to August 19 51

(1) Species		(2) First Seen			(3) Peak Concentration		(4) Last Seen		oduced	(6) Total	
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period	
I.	Swans: Whistling swan	Estimate sentatdi	d malber e breedd:	s exert p	rood count	d on obser	stions an	an or more	areas aggi	pre- legating	
II.	Geese: Canada goose Cackling goose Brant	The Last pariod.	refuge :	ecord for t	re abecrás	during the	sesson co	ncerned in	the report	fng.	
	White-fronted goose Snow goose Blue goose			der of the s				# 10			
II.	Ducks:			record for meen.		during the			t the repor	equa	
	Mallard Black duck Cadwall Baldpate Pintail	In addition to given to	con to t) g period those sy	should be s	8/20-51	t, other appropriate specification of the second signification of the second se	edes sh	None Seen	40 10 40	25 380 500	
	Green-winged teal Blue-winged teal Cinnamon teal		• • • •	200		Reported by		8	80	500	
	Shoveller Wood duck Redhead			60				Hene Seen	40	50	
	Ring-necked duck Canvas-back				Fránci	pal nestin	g areas this	a Bealaom			
	Buffle-head	prood sou	ita ——								
	Ruddy duck				Areas	used by cor	peneracio	4			
IV.	Coot:	PAGEOG		200	Teatle 1	aterford m	apera -			200	

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(sept 1020) interior - Dubilesting Section, Washington, Showster

Dates waterfowl counts made		Total waterfowl usage du	ring period		
Percent of waterfowl area	covered	Peak waterfowl numbers			500
Dates brood counts made		Areas used by concentrat	ions		
Percent of area covered in	brood counts				
Total production:		Principal nesting areas	this season		
Geese					
Ducks	80	· ·	Ecne Been		-
Coots	*** * * * * * * * * * * * * * * * * * *	Reported by			
STATEST CONTRACTOR	INSTR	UCTIONS	2	-90	200
(1) Species:	In addition to the birds list reporting period should be ad- given to those species of local	ded in appropriate spaces.	Special attent		
(2) First seen:	The first refuge record for to period, and the number seen.				ing
(3) Peak concentration:	The greatest number of the sp	ecies present in a limited :	interval of tim	le.	
(4) Last seen:	The last refuge record for the period.	e species during the season	concerned in t	he reporti	ng
(5) Young produced:	Estimated number of young prosentative breeding areas. Br 10% of the breeding habitat.	ood counts should be made or	n two or more a	reas aggre	egating
(6) Total:	Estimated total number of the may or may not be more than to of the migrational movement.				

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751 Form NR-1A (Nov. 1945)

MIGRATORY BIRDS (other than waterfowl)

Refuge Lake Ile

han waterfowl)

Months of May to August 1951 of May now to May to May to May 1951 of May 1961 of May 1

(1)	(2	*		3)	(4			(5) Production		(6) Total
Species	First	seeu	Peak No	umpers	Last	peen		Total #	Total	Estimate
Common Name	Number	Date	Number	Date	Number	Date	Colonies	Nests	Young	Number
				02-03/0	3	108/16	100		Nwa	Duck h
I. Water and Marsh Birds:				0.f=d\u	2		1 1		Owl	БелтоН
Eared Grebe			250	8/20-31			ha basa		60	800
Western Grebe			none se	911					10	
Pied-billed Grebe White Pelican			20 120	8/20/30	199				10	200
Double-crested Cormorant			6	8/20-30	44					6
Great Blue Heron			6	8/20-30	3.0		70			10
Black-crowned Night Heron			. 8	8/20-31						20
										1
the state of the state of										
dept. H. Marke	ayo Ve						110			
				TIONS	INSTRUC		100			
	oilibl ce		O.U. Check	A ant al	as found		the correct		pectes:	3 (T)
to the birds listed on			", thirth "	"seaguil!"	terms as		DiovA T			
I. Shorebirds, Gulls and	period Bu		at guarab	egulton n	b Burrane	no melan				
Terns:	notoerra.		novig ed	on sportd	lineita L Siew I. Wate		te space.		100-	200
Killdeer Willet	11 17 5 7 8		Ine sile	O etalde	II. Sher				1000	30
Lesser Yellow-legs			led) Ence	a and Pig	III, Dove					50
Greater Yellow-legs	tiginf8		rig (Falo	rā aunaņa	IV. Pred					100
Spotted Sandpiper										100
Dowitcher	. bena so		2 mil 101	spineds	oil for the		first rotu		irst Seen	30
Avocet Wilson's Phalarope	le Lavret		C man de	omeng wel	owen art to		n Jasjaerg		odmrM Mae	200
Gulls	A MAY 191			oppid car	sodo on		10010018		THE PARTY OF THE P	2000
Common Torn	barrebno		ed! anim	n zelsega	for the		lust refug	The	ast Seen:	300
Marbled Godwit										40
	imologika		on observ	beesd boo	ung produ		mated numb	Esti	roduction	9 (8)
				en seloso				A skew Till	1	T (a)
	2 BOJ ROLL		ing the r	(over)	s atty 10		na real month	Esti	0.1.1873	

	(1)	(%	5)	(3)	(4)			(5)		(6)
III.	Doves and Pigeons: Mourning dove White-winged dove	rica vic	to to	3 00	8/1-30	Mich (other t		ollo	tale	100	\$00 \$00
	(5) (6)	19	ges	Last S	2790	(3) Peak Num	лая			(1) edies	2 .
IV.	Predaceous Birds: Golden eagle	2 1001	8/16	2 10	8/16-30	lumber	Date	umber		emaN non	maJ
	Duck hawk Horned owl Magpie	1 none	8/20 8/2	2	8/20-30	698			Birds:	derish bu	s refer I
	Raven Crow			100	8/20-31	gok emen 68 0 681				odero h	100
	Marsh Hawk Sparrow Hawk			10	8/20-31					moo hode Moren	10
					(((((((((((((((((((Elek eta		Disal-oro
							Reporte	d by	hesley M.	Dinkins	

INSTRUCTIONS

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. <u>Shorebirds</u>, <u>Gulls and Terns</u> (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the resse during the period concerned.

9

UPLAND GAME BI

Refuge District Resemble as listed Months of May to August , 19451

					*SMECT COME	lse correct con	(1) SPROTES:
(1) Species	(2) Density	mer ni apecies	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated	Percentage	Hunting For Restocking	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
LAKE ILO Phoasant Sharp-tailed Grous Hungarian Partridg	tionland hardwoods didiffe Management S should be based or Survey method use Semarks.		6 71 1 20 0 30	possible	od counts or	100 30 50	Smallest population since refuge established.
HIDDENWOOD Phearant Sharp-tailed Grous Hungarian Partridg			0	produced, base habitat.	Burpalend an'	20	(3) YOUMI PRODUCED:
LA KE PATRICIA Pheasant Sharp-tailed Grous Hungarian Partridge	.bolreq droqer en	j gaine	0 50	ach category	ni redmin	75 10	(5) REMOVALS:
LEGION LAKE Phoasant Sharp-tailed Ground	Suge during certain	the re	0 20	termine population metion meti	tau tedmus l sig sbrid da se tine to de	50 ha	(6) TOTAL:
Molean Pheasant Sharp-tailed Grous Hungarian Partridge			0 Sc 0 0 10 0 20	should be use	perevos buln		oilqqs ammuleo vinO *
1613							

Refuge mistaint IV Monamerica, as listed

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES:	Use	correct	common	name.
--------------	-----	---------	--------	-------

- (2) DENSITY: Applies particularly to those species considered in removal programs (public Species hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area . bedsauper vilselibegs of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
 - (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
 - (5) REMOVALS: Indicate total number in each category removed during the report period.
 - (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
 - (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

hungarian Fantrides

^{*} Only columns applicable to the period covered should be used.

(April 1946)

Refuge nistrict IV Essements, as listed. Months of Max (3) (4) (1) (2) (5) (6) (7) Young Sex Species Density Removals Total Remarks Produced Ratio Number broods obs'v'd. Estimated Total For Restocking For Research d as regarden equie Estimated Hunting once submitted, t Acres number Pertinent information not Cover types, total per using specifically requested. acreage of habitat Common Name Bird Percentage Refuge List introductions here. arm PRETTY ROCK diffe Management 70 Phonont Sharp-tailed Grouse 10 20 Survey method Hungarian Partridge 0 20 30 under Remarks. areas should b STER ARE LAKE educo Laujos bas anoltavieso mber of young produced, 30 Phosesuits nibsend svijsj 30 Sharp-tailed Grouse 20 0 Hungarian Partridge obelonI - pote princese iq applies primarily to wild Idaliava li es WHITE LAKES Pheasants 30 HIGHOVALS: boined frequent period. toreday in sach categor Sharp-tailed Grouse Hungarian Partridge and bolton and bound of r using the refu into the refuge during certain talm esodi anla abuld ident ndicate method used to determine population and area covered in survey. bedseuper vilselitiones d'in noldsammelt d'entitre requesteu. .beat ed bluods leveros beirag edt of eldspilggs emmules yln0 *

3-1752 Form NR-2 (April 1946

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Us	e correct common	name.
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- Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

Hummarian Pa

^{*} Only columns applicable to the period covered should be used.

EASEMENT REFUGES OF DISTRICT 4a

Clearwater Easement:

The area was visited on August 3, 1951 by Messrs. McGlauchlin and Frye for inspection and brood counts. Water conditions and aquatic vegetation was in adequate condition for this type of area where the land is utilized for farming down to the waters edge. The entire area under easement was reported as needed. A bathouse has been erected at one point on the beach and has resulted in a wide dispersion of broods and wild actions in the adult birds. Brood count data will be found in the following table.

Shell Lake Easement: (McAlmond)

The area was visited on August 3, 1951 for inspection and brood counts. This area is also mis-used from an agricultural standpoint. Water conditions were good and a fair number of broods were observed. At the time of the visit there were large concentrations of Avocets and Marbled Godwits present. There were 150 avocets feeding in one small pothole. Brood count data will be found in the following table.

Zahl Easement:

This area was visited on August 1, 1951. The newly acquired Section 36 was inspected as to suitability for use as a grazing unit but as this area has been badly overgrazed in the past it was decided not to permit any grazing for the present. The privately owned fence around the section is to be removed and replaced with a Gov't. fence as soon as time permits. The dike was inspected and all badger holes were caved in and shoveled shut. Some reposting is necessary and portions of the Government-owned fence are in need of repair. These jobs will be attended to in the near future. Brood counts were taken and proved this area to be highly productive as in preceding years. Brood count data will be found in the following table. While making the brood counts Mr. Huenecke, Acting Refuge Manager, Des Lacs, observed four (4) black ducks which are relatively rare this far west. Also observed were 150 pelicans, numerous shore birds and 13 broods of Coots.

BROOD COUNT - CLEARWATER LAKE NATIONAL WILDLIFE REFUGE August 3, 1951

Class	LA		IB		I	IA	II	В	II	I	To	tal
Species	Number Young	Number Broods	Number Young	Number Broods	Number Young	Mumber Broods	Number Young	Number Broods	Number Young	Number Broods	Number Young	Number Broods
Mallard							10	1			10	1
Pintail					19	4					19	4
Blue-wing T	eal		10	2							10	2
Canvasback			5	1	3	1					8	2
Ruddy Duck			9	1	14	2					23	3
Unidentifie	ed				11	2					11	2
Totals			24	4	47	9	10	1			81	14

BROOD COUNT - SHELL LAKE NATIONAL WILDLIFE REFUGE August 3, 1951

Class	I	A	I	B	II	A	II	В	II	I	Tot	al
Species	Number Young	Number Broods	Number Young	Numbe: Brood								
Mallard					5	1.	29	4	9	1	43	6
Pintail			3	1	11	2					14	3
Blue-wing Teal			6	1	10	3	8	2			84	6
Shoveller									11	2	11	2
Canvasback					10	2					10	2
Scaup							11	1			11	1
Unidentified			18	3	46	10	4 8	7	20	3	132	23
Totals			27	5	82	18	96	14	40	6	2 45	43

BROOD COUNT - LAKE ZAHL NATIONAL WILDLIFE REFUGE August 1, 1951

Class	I	A	I	В	II	A	II	В	II	I	To	tal
Species	Number Young	Number Broods	Number Young	Number Brood								
Mallard			27	5	60	9	62	14	75	14	224	42
Pintail			6	2	12	2	31	5	3 6	10	85	19
Blue-wing Teal	5	1	12	1	21	3	21	3	10	2	69	10
Baldpate		e	6	1	8	1					14	2
Shoveller							12	2	22	4	34	6
Gadwell			28	3	5 5	5	7	1			70	9
Redhead	28	3	27	3					8	1	63	7
Canvasback			21	3	8	1	8	1	6	1	43	6
Ruddy Duck	24	5	27	6	16	3					67	14
Unidentified	40	5	23	5	36	6	18	3	15	2	132	21
Total	97	14	177	29	196	30	159	29	172	34	801	136

3

Refuge Clearmater Leke Months of May to August 19 51

	(1) Species	First		Peak Conce		(4) Last S		Young P	5) roduced	(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	sentativ	d number e breedii	g aress. B	rood count	spoold be	made on t	NO OF MOPE	ounts on 14	egating
II.	Geese: Canada goose Cackling goose Brant White-fronted goose	The last period,	*	secord for th						ប្រជ
	Snow goose Blue goose	perfod,	and the n	umber seen. er of the s	This col	um does no	apply to	resident	rpecies.	None
III.	Ducks: Mallard Black duck Cadwall Baldpate Pintail	reporting	g period those as	a birds list should be ac seies of lo	ded in ap	ropriste s tonel etm	aces. Sp ficance.	cial atte	25 strings charing	200 1
	Green-winged teal Blue-winged teal								20	
	Cinnamon teal Shoveller Wood duck Redhead					Reported by	40,00	8. 50.	20	150 × 25
	Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye	ptood com				pal nesting			20	25
ates erce otal	Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup	stood cou	a 1951		Prince		areas th	a aces 2		25 50 50 25

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

(Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Dates waterfowl counts made	August 5, 1951	Total waterfowl usa	ge during period	980	
Percent of waterfowl area	covered 75%	Peak waterfowl numb	ers		300
Dates brood counts made	August 8. 1951	Areas used by conce	entrations Open wa	ter eres.	- 10
Percent of area covered in	brood counts				
Total production:		Principal nesting a	reas this season	272	25
Geese					- 10
Ducks 145					\$2
Coots		Reported by	John R. Prys		700
Pintell Con-whited tent	INSTRUC	CTIONS	4	40	160
(1) Species:	In addition to the birds listed reporting period should be added given to those species of local	ed in appropriate space	es. Special attent		
(2) First seen: (3) Peak concentration:	The first refuge record for the period, and the number seen. The greatest number of the spec	This column does not a	pply to resident sp	the reporti	
(4) Last seen:	The last refuge record for the period.	species during the se	sson concerned in t	he reporti	ng
(5) Young produced:	Estimated number of young produced sentative breeding areas. Broadlow of the breeding habitat.	od counts should be ma	ade on two or more a	reas aggre	gating
(6) Total:	Estimated total number of the may or may not be more than the of the migrational movement.				

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WALTERFOW

Refuge Shell Lake Months of May to August 19 51

Species	First	Seen	Peak Conc		Last S			5) roduced	(6) To tal
Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. Swans: Whistling swan	sentativ	d number s breedir	g areas. B	rood count		made on t	NO OF HOLE	areas aggi	egating
II. Geese: Canada goose Cackling goose Brant		refuge :	ecord for t	e species	during the	segron co	scerned ir	the report	gug
White-fronted goose Snow goose			er of the s			(0.)	1 10 10 10 10 10 10 10 10 10 10 10 10 10	Dille "	
Blue goose	The first period,		record for unber ween.		during the			a the report speater.	None
Mallard Black duck Cadwall	reportin		should be so				ectal atte		500
Baldpate Pintail	In addit	on to th	MST a birds list	UCITIONS	s other ap	· · · · · · · · · · · · · · · · · · ·	rdng on r	30 20 3 0	300 200 400
Green-winged teal Blue-winged teal Cinnamon teal					Reported by	John	6	50	500
Shoveller Wood duck Redhead				-			2	25	75
Ring-necked duck Canvas-back Scaup		4		Princ	pal nesting	areas th	2 2 2	20 20	150
Golden-eye Buffle-head Ruddy duck									
Ruddy duck	August A	, 1981			ased by con		a Open	adjón endt.	200
IV. Coot:		10 2 . 101 10 10 10 10 10 10 10 10 10 10 10 10 10 1		Peak	sterioul u			9 % Sec.	1000

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

N

(Sept.1950) interior - Duplicating Section, Washington, D.C. 82449

Dates waterfowl counts made	August 3, 1951	Total waterfowl usa	ge during period	3,440	
Percent of waterfowl area		Peak waterfowl numb			F000
Dates brood counts made	August 5, 1951	Areas used by conce	ntrations Open	water area.	500
Percent of area covered in	brood counts 50%				
Total production:		Principal nesting a	reas this season	80	00 700
Geese					00
Ducks 270			5	36	7.6
Coots		Reported by _	John R. Prys	96	950
C. Platell.	INSTRU	CTIONS	3	-00	\$00
(2) First seen: (3) Peak concentration: (4) Last seen:	reporting period should be add given to those species of local the first refuge record for the period, and the number seen. The greatest number of the species of local the greatest number of the species.	and National signification and National signification of the second state of the second significant and second significant and second significant second seco	eason concerned pply to resident ted interval of ason concerned i	in the report: species. time. n the reporting	ing TOPE
(5) Young produced:	Estimated number of young produced sentative breeding areas. Broadlow of the breeding habitat.	ood counts should be ma	de on two or mor	e areas aggre	gating
(6) Total:	Estimated total number of the may or may not be more than the of the migrational movement.				

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Lake Zehl Months of May to August 19 51

qued |

(1) Species) Seen	Peak Conc		(4 Iast				(6) Total
Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
Swans: Whistling swan	Betimat: sembati	d number e breedi	of young pu	educed bas			d actual	ounts on r areas agg	pro- egating
Geese: Canada goose Cackling goose Brant White-fronted goose	The last period.					專			qug
Snow goose Blue goose	perfect,	end the r	mper rear	This col	mar does no	abbja po	**************************************	species.	None
Ducks: Mallard							42	400	1500
Gadwall Baldpate Pintail			e birds iis	sed on for			0	150 30 150	200 75 1000
Blue-wing ed teal Cinnamon teal		1-			Reported b	- You	10	120	25 500
Wood duck Redhead						*	7	120	600
Canvas-back Scaup				Prince	pal nestin	areas th	a see 6 ou	75 50	200
Buffle-head Ruddy duck				Areas	ased by co	nentra tio	14	120 ·	200 /
Coot:	opvered	ED.,;-		Peak	ateriowi n	прета	13	50	2000
	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Elue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Elue-winged teal Cinmamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Blue goose Blue goose Blue goose Blue goose Blue duck Cadwall Baldpate Pintail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck Ruddy duck Redhead Ruddy duck Ruddy duck Redhead Ruddy duck	Common Name Number Date Number Date Number Date	Common Name Number Date Number Date Seen Foung P	Species First Seen Peak Concentration Last Seen Young Produced Common Name Wumper Date Number Date Rescuestinated Smans; Whistling swan Geese; Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Blue goose Blue duck Cadwall Back duck Cadwall Creen-winged teal Cinnamon teal Showeller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck Ruddy duck Redhead Ruddy duck Ruddy duck Redhead Ruddy Ruddy Redhead Ruddy Ruddy Redhead Ruddy Ruddy Redhead Ruddy Redhead Ruddy

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

(Sept.1950) Interfor - Duplicating Section, Washington, D.C. 52449

Dates waterfowl counts made	August 1. 1951	Total waterfowl usage during	period	6,600	
Percent of waterfowl area cover	red 50%	Peak waterfowl numbers	38	1 80	5000
Dates brood counts made Percent of area covered in broo		Areas used by concentrations	Open	ter area.	1500
Total production:	d counts	Principal nesting areas this	season	20	800
Geese			Ġ	350	000
Ducks 1,277 Coots 50		Reported by	Frye	80	100
representation repres	addition to the birds listed porting period should be added to those species of local	on form, other species occurred in appropriate spaces. Spec	ring on recial atten	efuge during	g the
(2) First seen: The		species during the season cornis column does not apply to		n the report	
tration: (4) Last seen: The		ies present in a limited interspecies during the season cond			ing
ser	ntative breeding areas. Brood	ced based on observations and i counts should be made on tw stimates having no basis in fe	or more	areas aggre	egating
maj		pecies using the refuge during t used for peak concentration			

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

MY JUGSTLOM

LAKE ILO REFUGE.

I. GENERAL.

A. Weather Conditions.

Precipitation was below normal at Lake IIo during the period. Most of the snow stayed on the ground until the end of the period. The winter was considered good until the latter part of February and March, at which time two very severe blizzards occurred. This spring was later than usual but not as late as last spring.

Weather data for the past four months are as follows:

Month	Precipitation	Snowfall :	Max.Temp.	Min.Temp.
January	•45	6.3	38	-31
February	.98	14.4	43	-26
March	. 20	4.2	47	-29
April	1.16	4.3	74	10
Total	2.79	29.2" Extrem	es 74	-31

The spring run-off occurred on March 27, approximately seven days later than usual.

B. Water Conditions.

The Lake Ilo ice level was 17" below the spillway crest on January 1, 1951 and remained this way until March 27 at which time the run-off started and by 4:00 P.M. this date the water started going over the spillway, at 7:00 P.M. it was 7" above spill crest and on March 29 reached a peak of 25" above crest. By April 4 the water level had dropped to 10" above spillway, April 13 to 5" and from this date until the close of the period the water level remained approximately 2" above spillway crest. The ice was measured in February and found to be 32 inches in thickness. All the ice disappeared from the lake on April 26.

C. Fires.

No fires occurred during the period. Fire hazards were very low because there was snow on the ground most of therperiod.

II. WILDLIFE

A. Migratory Birds.

A few mallards were seen on the refuge during February as they wintered in the springs near the Killdeer mountains, as reported by a rancher in that vicinity. The lake was completely frozen over this

winter and it is the first time for several years that ducks have not wintered here.

The first spring migration appeared on March 26 and consisted of mallard and pintail. Migration was very slow and later than usual. There were less goese using the refuge this spring than usual. On April 3,600 and on April 17 - 150 Canada goese were observed on the refuge. On April 20 - 50 snow goese were seen. It is estimated that 2,000 Blue bills were on the refuge the later part of April. Shore bird migration seemed to be late and only the following have been observed. A few killdeer and willet, also a few gulls, consisting of Franklin's, ringbilled and Herring.

B. Upland Game Birds.

It is estimated that 450 pheasants were using the refuge at the beginning of the period and remained at this number until March at which time two severe blizzards occurred. It is estimated that 75% of the pheasant population was killed during these blizzards, and approximately 100 remain on the refuge at the close of the period.

More sharp-tailed grouse were observed on the refuge this winter than for several years. It is estimated that 100 used the area this winter and about 30 are using the area at present.

A number of Eungarian partridges have been observed this spring. It is believed that there were 100 on the refuge at the beginning of the period and 50 are present at the close of the period.

C. Big Game Animals. None.

D. Fur Animals, Predators, Rodents, and other Mammals.

A permit was issued to trap fur-bearing animals on the refuge but due to the cold weather during most of the trapping period combined with the heavy snowfall it was impossible to trap. It appears that the muskrat population is smaller than last fall. A few signs of mink have been observed and their numbers remain approximately the same as last fall, and it is believed that about 20 are using the refuge at present. Very few signs of weasel were observed during the period and only a few seem to be using the refuge. A number of skunk have been observed this spring and it is believed their population is a little larger than usual.

No coyote or fox have been observed on the refuge. A den of fox were found three miles east of the refuge, the first young fox ever found in this vicinity. Very few coyote are present in this locality and their population is considered very low.

Three beaver were trapped near the refuge and three were observed on the refuge this spring. Slight damage was done to trees at several places.

E. Predacious Birds, including Crows, Ravens, Magpies.

The first crows appeared on the later part of March and they have been present on the refuge ever since. A number of Golden Eagles have been observed during the winter. The last one seen was on April 17. A number of Prairie Falcons were seen during the period but in numbers below last year. A few Marsh Hawks have been observed on the refuge this spring but it is believed their numbers are smaller than usual.

F. Fish.

Winter fishing was permitted from December 1 to March 1 and a large number of fishermen used the area when the weather was fit. Very few fishermen used the area in February due to blocked roads. The principal catch was Perch, with very few crappies caught. During the last week of February fish would come up in the holes cut in the ice by fishermen but a week later holes were cut and checked and no fish were seen. When the ice was all melted from the lake on April 26 a large number of dead fish were observed, picked up and buried. About 12 ton of fish were picked up on dam, northshore to west end of recreational area and south shore to a short distance west of headquarters. 90% of the weight of the dead fish were Carp, weighing from 5 to $8\frac{1}{2}$ lbs. the other 10% in weight consisted of Bass, Crappies, blue-gills, perch, suckers, channel catfish, bullhead, golden eyes and Pike. Fifty six channel cat fish were picked up that weighed from 12 to 182 lbs. Bass and Pike averaged 2 lbs. ea. and most of the crappies and perch were small. About 60% of the dead fish went over the spillway on April 27 and 16 local people assisted picking up fish. On April 29, 10 ton were picked up hauled away and buried and after that very few were observed.

III. REFUGE DEVELOPMENT - MAINTENANCE

A. Physical Developments.

The following maintenance and construction projects were completed during the period:

- 1. Cleaned up form lumber that was used on Lake Ilo Spillway repair.
- 2. Placed hay against spillway walls to keep weep holes from freezing.
- 3. Placed asbestos paper and tin around chimney and stove in garage.
- 4. Installed new window panes in buildings at headquarters.
- 5. Cleaned and repainted boat #648.
- 6. Cut hole for door between office and adjacent building.
- 7. Cpened snow blocked roads several times. Maintained roads.
- 8. Painted basement and all of interior of residence.
- 9. Laid asphalt tile on bathroom floor.

- 10. Made minor repairs on IHC Pickup #I-16922 and Diamond T Truck #I-16956.
- 11. Made up wakefield piling for Pretty Rock spillway repair.
- 12. Constructed and placed covers on disposal field at headquarters.
- 13. Repaired creek crossing on refuge road below dam.
- 14. Installed new anchor post and painted flag pole.
- 15. Repaired refuge boundary fence that was broken down by snow. Built three new gates.
- 16. Started building new refuge boundary fence on West line of Swigner of Sec. 29. Corner post and gate post were installed in concrete.
- 17. Started to build barnyard at headquarters. 10% completed.
- 18. Picked up and disposed of approximately 12 tons of fish.
- 19. Hauled load of material to Des Lacs on Diamond T Truck and worked there from May 2 to May 5 hauling gravel.

B. Plantings.

No grain crops are to be planted by refuge personnel. The following cooperative farming permits are in effect for agricultural land on the refuge.

Permit No. 18707 Tom Donohoe 45 acres corn and wheat. Permit No. 18706 Charles Schollmeyer 85 acres barley and wheat.

All of the land under permit to Mr. Donohoe will be seeded as it was all summer fallowed last year with the exception of refuge share that was planted to corn. The refuge share will be corn.

One-half of the land under permit to Mr. Schollmeyer will be summer fallowed. Refuge share will be wheat or barley.

IV. ECONOMIC USES.

- A. Grazing. None this period.
- B. Haying. None this period.
- C. Fur Harvest.

A trapping permit was issued to Mr. A. B. Rosendahl of Dunn Center, North Dakota to authorize the taking of Mink, Skunk, Weasel and Muskrat. The Mink, Weasel and Muskrat pelts to be shared on a 50-50 basis and the trapper is allowed to take all the pelts of the other animals. No trapping was done on the refuge due to bad weather and blocked roads.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Bird Banding. None.

VI. PUBLIC RELATIONS

A. Recreational Uses.

The Lake Ilo Recreational Area, maintained under cooperative agreement by Dunn County, has not been used this period due to the late spring. The area is to be maintained as in the past. Trees are to be cultivated and the grounds kept clean.

HIDDENWOOD

I. GENERAL.

The snowfall was above average in this vicinity and the winter was colder than normal. The area has not been visited this period, but it is believed the water level is higher than usual.

II. WILDLIFE.

Two trapping permits were issued to remove mink, weasel, skunk, badger, fox and muskrat from the refuge. No trapping was done under either permit due to inclement weather. Mr. Wilson, asfarmer who lives near this refuge reported that the upland game birds wintered very good.

III. PHYSICAL DEVELOPMENTS.

None

LAKE PATRICIA

I. GENERAL.

This refuge was not visited during the period. The State Game and Fish Department has control of most of this area. Water levels are believed to be higher than last year. The snowfall was about normal in this vicinity.

II. WILDLIFE.

The usual number of waterfowl used the area during migration and a good number of nesting birds are present. The upland game birds - Pheasant, Grouse and Hungarian Partridge wintered very good in this vicinity due to a more open winter.

III. PHYSICAL DEVELOPMENTS.

None.

LEGION LAKE

I. GENERAL.

The snowfall was above average in this area. There was a heavyy run-off. The water elevation was 12" above spillway crest when visited on April 5, and the water has continued to flow over the spillway until the end of the period.

II. WILDLIFE.

A few pintail and mallard were observed on the area when visited on April 5. It is believed the usual number of birds used the area during spring migration. A trapping permit was issued to a local farm boy to remove fur-bearing animals from the refuge and he reported 7 mink taken.

III. PHYSICAL DEVELOPMENTS.

- 1. Structures were inspected.
- 2. Observed wildlife and checked water levels.

MolEAN

I. GENERAL.

This area was visited only once during the report period. The snowfall was above average with a late spring. The run-off occurred on April 5 and 6. The water elevation was 6" above spillway crest on April 5. The estimated peak run-off was 18" above spill crest.

II. WILDLIFE.

A few mallard and pintail were using the area when visited on April 5. The lake was covered with ice. It is believed the usual number of migratory birds used the area during April.

III. PHYSICAL DEVELOPMENTS.

Structures were inspected on April 5 and snow was cleaned out of culverts below spillway. The structures appeared to be in good condition.

PRETTY ROCK

I. GENERAL.

The snowfall in this vicinity was below average. In fact there was very little at any time all winter. The run-off occurred during the latter part of March. The water level was 12" above spillway crest on March 27 during the peak run-off.

II. WILDLIFE.

The following birds were observed on March 27. 200 Pintail, 16 Blue-bills, 32 baldpate, 20 mallard and 6 Canvas Back. It is believed that the usual number of birds used the area during the spring migration. A few ring-necked pheasant were observed on the refuge. Their number was small last fall compared to the past. It was reported by farmers that the pheasants wintered good. The Sharp-tailed Grouse and Hungarian Partridge survived the winter very good, and a few are using the area at the present time.

A trapping permit was issued to a farm boy living on the refuge. No report has been received from him to date.

III. PHYSICAL DEVELOPMENTS.

- 1. Inspected structures, checked water level and observed wildlife on March 27, the only time the refuge was visited during period.
- 2. Wakefield piling were made up at Lake Ilo for the spillway repair.
- 3. Material was purchased for spillway repair and hauled to Lake Ilo Refuge.

STEWART LAKE REFUGE

I. GENERAL.

Precipitation and snowfall were below normal in this locality during the report period. It was an open winter with cattle grazing most of the period. There was a very light run-off with only a small stream flowing over the spillway. The spillway seemed to be in the same condition as last fall. The water level was approximately 2 feet below spillway crest when the lake froze over last fall and when last visited on March 26 a small stream was flowing over the spillway.

II. WILDLIFE.

When visited on March 26 the following birds were observed: 40 Canada Geese, 500 Pintail and 20 Mallard. No Pheasants were observed on the refuge on this date but it is reported by farmers that they wintered very good. Several were seen along the road in this vicinity. A few Sharp-tailed Grouse and Hungarian Partridge are believed to be using the area.

Two trapping permits were issued to local parties on the area. They reported that they did not do any trapping.

III. PHYSICAL DEVELOPMENTS.

- 1. Structures inspected on March 26, 1951.
- 2. Observed birds and other wildlife.

WHITE LAKE

I. GENERAL.

Precipitation and snowfall were below normal during the report period. The spring run-off was very light. The peak run-off was 6" above spill-way crest on March 22 and 2" was flowing over the spillway on March 26.

II. WILDLIFE.

Birds observed on March 26 consisted of a few pintail and mallards. The lake was covered with ice.

It was reported by a farmer that more pheasants were using the refuge than there has been for several years, but at that their number is small. A few Sharp-tailed Grouse and Hungarian Partridge are using the area.

A trapping permit was issued to a farmer living on the refuge. He reports that he had traps out for mink but did not catch any.

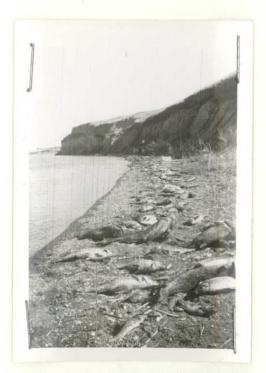
III. PHYSICAL DEVELOPMENTS.

- 1. Structures were inspected on March 26.
- 2. Wildlife observed on March 26.

-



Using a front-end loader to clean dead fish from shore lines. Lake Ilo Refuge.



Some of the winter killed fish at Lake Ilo.



Hauling the fish away by the truck loads to bury.

Refuge Lake Ile Months of January

	(1) Species	First	2) Seen	Peak Conc	entration	(4) Last S) Seen	Young P		(6) To tal
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	Estimate sentativ	d musber s breedin	of young pr g areas. B	nduced base	d on observation of should be			ounts on re areas aggr	pre- egating
II.	Geese: Canada goose Cackling goose Brant	600	4/3-31	600	4/3-11	gm. 15 0 gpe	4/17-80	icerned in	the report	750
	White-fronted goose Snow goose Blue goose	60 50	4/8	200	ACCESS TO THE PERSON NAMED IN	75 25	4/26	resident	pecies.	275 275
III.	Ducks: Mallard Black duck Gadwall	24	3/24 4/18	800	4/1-10	ropriete sy tonal signi during the	noss Sp	cial atten	tuge during thom should the repor	1600
	Baldpate Pintail Green-winged teal	30 75	3/26	200 1000	8/25-4/10		oges boom	adas m s	from durin	300 2000
	Blue-winged teal Cinnamon teal	None see	4/21	100	4/20-30	Reported by	(5:00)	A a' pres	g sea	200
	Shoveller Wood duck	2	4/18	100	4/20-30					200
	Redhead Ring-necked duck	20	4/8	100	4/10-30					100
	Canvas-back Scaup	5 30	3/31	1000	4/10-20	pel nesting	press thi	a season .		1200
	Golden-eye Buffle-head	3	4/18	20						20
	Ruddy duck	11	4/22	40	Less	med by con	mentration	g 83	the stop,	40
IV.	Coot:	15	4/22	200	4/20-30	sterios, nu	pale		#990	200

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

(Sept. 1950) Interior - Implicating Section, Washington, Dec.

Dates waterfowl counts mad	е			Total waterfowl usage during pe	eriod						
Percent of waterfowl area	covered _	4/62	289	Peak waterfowl numbers	4690	330					
Dates brood counts made	377	alen :	100	Areas used by concentrations	entire area.						
Percent of area covered in	brood cou	ints	20	u .		20					
Total production:		4/4	80 1000	Principal nesting areas this se	eason	1300					
Geese	80		100	6/20-00		900					
Ducks	- 5		100	e\30-ga							
Coots	1000	4/21	P-0	Reported by Chesley N	l. Dinkins	200					
(1) Species:	reporting	g period	e birds li	sted on form, other species occurring added in appropriate spaces. Special and National significance.		be					
(2) First seen: (3) Peak concentration:	given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species. The greatest number of the species present in a limited interval of time.										
(4) Last seen:	The last	refuge r	ecord for	the species during the season concern	ned in the reporti	ng (e)					
(5) Young produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.										
(6) Total:	may or m	may not be		he species using the refuge during the that used for peak concentrations,							

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

No sea (Market Refuge Hiddenwood Months of January to April 19 51

90

NO

	(1) Species	First	e) Seen	Peak Conc		(4 Last) Seen	Young P	5) roduced	(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	Estimate sentativ	inmber e breedin	of young pro	duced base bod counts				ounts on re areas aggr	pre- egating
II.	Geese: Canada goose Cackling goose Brant	The last period,	reinge r	None obser	3	during the	sesson col		the report	lng
	White-fronted goose Snow goose Blue goose			mber seen.	-					
III.	Ducks: Mallard Black duck Cadwall Baldpate Pintail	reporting given to The firs	period those sp	hould be so bedes of loc record for t	ed on form ded in app al and Mat ne species	ropriate appoint the during the	ficance,	cial atte	thon shoul	pe .
	Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead				ved. Not	visited du	ring peried	. 124 H.V		
	Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head	rood cou	te.		Franci	al mesting	sress thi	e senson		
	Ruddy duck			*	Areas	med by cor	mentration		10	
TV.	Coot:	Terred			Peak v	steriori m	pera		- u	

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449 3-1750

(Sept.1950) Interior - Duplicating Section, Washington, Dec. 52449

Dates waterfowl counts made	Total waterfowl usage during period
Percent of waterfowl area of	overed Peak waterfowl numbers
Dates brood counts made	Areas used by concentrations
Percent of area covered in	brood counts
Total production:	Principal nesting areas this season
Ducks	
Coots	Reported by
Pintall Great-Athged text	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak concentration:	The greatest number of the species present in a limited interval of time.
(4) Last seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Lake Patricia Months of January to April 19 51

	(1) Species	(2 First		Posk Cone	entration	(4) Last S			5) Produced	(6) Total
								Broods	Estimated	Estimated
	Common Name	Humber	Date	Number	Date	Number	Date	Seen	Total	for perio
I.	Swans:	sentativ	s breedin	g areas . b	rood count	should be		NO CE HOL	sies sil	egating
	Whistling swan	Estimate	d number	of young pr	educed bes	d on observ	ations an	aetual	punts on re	bre-
II.	Geese:	benrog*								
	Canada goose	The last	relage I	scord for t	de apredas	during the	Begraper co	losined l	r gre neben	TOE
	Cackling goose Brant									
	White-fronted goose	titud River	eses broom	None obse	ved.	ent in a Ti	arthor bus	T ACT OF		
	Snow goose	The second	Carala syring							
	Blue goose	betregt.	and the p	the state of the s	The Free Control of	ing period.	the second frame of the	mental of seasons	al neage.	
II.	Ducks:	The firs	refuge	record for	he specie	during the	a estacan o	media	A the repor	CIUS -
	Mal la rd	ETABLE PO	those sy	200	4/1-10	Comen	TICHTOR'S			200
	Black duck		period	smonld be a	ded in ap	ropriate a		CTST MOO	SETON SPON	
	Gadwall		con to th		ed on for				Trans earry	20
	Baldpate Pintail									200
	Green-winged teal			13/5/	norions.					200
	Blue-winged teal									200
	Cinnamon teal Shoveller						= " "		1	700
	Wood duck				7					100
	Redhead							-	-	100
	Ring-necked duck			n				The second		
	Canvas-back				Profine	er nengus	areas th	S SUADOR		100
	Scaup Golden-eye									400
	Buffle-head	saecd com	學相		2 11					10
	Ruddy duck	-			Areas	meg pår den	HISTOTOM CTO			50
	Coot:	Vered		-	FORK I	steriow, m	spera .			50
	MEDELIOSI COMUNICALINGS	-			Loret	sterlow u				

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

SUMARIES

Dates waterfowl counts made		Total waterfowl usage during period	1850 Retimated,				
Percent of waterfowl area	covered	Peak waterfowl numbers					
Dates brood counts made		Areas used by concentrations					
Percent of area covered in			To the				
Total production:		Principal nesting areas this season	480 560				
Geese	- 10		. 700				
Ducks	-		100				
Coots		Reported by					
Plate all	INSTRU	UCTIONS	200				
(1) Species:		ed on form, other species occurring on reflect in appropriate spaces. Special attental and National significance.					
(2) First seen:		ne species during the season concerned in This column does not apply to resident sp					
(3) Peak concentration:	The greatest number of the spe	ecies present in a limited interval of tim	e.				
(4) Last seen:	The last refuge record for the period.	the species during the season concerned in the reporting					
(5) Young produced:	sentative breeding areas. Bro	duced based on observations and actual coursed counts should be made on two or more a Estimates having no basis in fact should	reas aggregating				
(6) Total:		species using the refuge during the periodat used for peak concentrations, depending					

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Logion Lake

Months of January

(1) Species) Seen						roduced	(6) Total
Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for perio
Swans: Whistling swan	Estimate sentativ	d number e breedir					setual c		
Geese: Canada goose Cackling goose	The last period.	refage i	scord for t	e Species	during the	senson co		the report	75
Brant			None obser	ved.		1		_	
White-fronted goose Snow goose								Tide "	75 75
Ducks •	The firs	refuge	record for	he apecies	during the	HORSON O	in begreen	the repor	cing
Mal la rd	10	4/5	200	4/5-15	TANGET ATEM				400
Black duck	and the same of the	Please or	and an int In	room to whi			WITHT MANO	COTTON DINGS	
Gadwall	THE WORLD	TOU ED EU		4/20-30	a ochar spa	GISS OCCU	Ting on r	ridge durin	20
	1.5		50	4/10-20				Share Breed	100
	20	4/5	200	Delitore					500
			40	4 fee =0					
			50	4/20-30	Reparted by	(per	in my	Tank Y	40
			40					l .	40
Wood duck									30
Redhead		,	20						40
Ring-necked duck			8 12						
A STATE OF THE PARTY OF THE PAR			20	BUTTER	pal nesting	PLESS PHO	B Bearon		40
	1			*					200
Golden-eye	preed com	the .	The state of the s						10
									10
			20				G.	epiza stav	40
Coot:	MARLEG		50	LOSTE A	starfowl mu	mpers .		930	100
	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Common Name Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brent White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Canvas-back Scaup Golden-eye Buffle-head Ruddy duck First Seen Peak Conc Number Date Number Number 10 4/5 200 10 4/5 200 10 4/5 200 10 4/5 200 10 20 20 20 30 30 30 30 30 30 30 30 30 30 30 30 30	Species First Seen Peak Concentration Common Name Number Date Number Date Swans: Whistling swan Geese: Canada goose Cackling goose Brent White-fronted goose Snow goose Blue goose Ducks: Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck Peak Concentration Number Date Number Date Number Date Number Date Number Date Number Date Number Date Number Date Number Date State St	Common Name Common Name Swans: Whistling swan Geese: Canada goose Cackling goose Brant White-fronted goose Show goose Blue goose Blue goose Ducks: Wallard Black duck Cadwall Baldpate Plntail Green-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Canvas-bac	Common Name Number Date Number Date Number Date	Common Name Rumber Date Number Date Numbe	Species First Seen Peak Concentration Last Seen Young Produced Common Name Number Date Number Date Broods Estimated Swans; Whistling swan Geese: Canada goose Cackling goose Brent White-fronted goose Show goose Blue goose Blue goose Black duck Cadwall Black duck Cadwall Broods Brent Black duck Cadwall Black duck Cadwall Black duck Cadwall Creen-winged teal Blue-winged teal Cinnamon teal Showeller Wood duck Redhead Ring-necked duck Canvas-back Canv

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

SUMARIES

Dates waterfowl counts made	Total waterfowl usage during period _	1565							
Percent of waterfowl area covered	Peak waterfowl numbers	810							
Dates brood counts made	Areas used by concentrations	artire area.							
Percent of area covered in brood counts		70							
Total production:	Principal nesting areas this season	700							
Geese		. h							
Ducks		40							
Coots	Reported by Chesley M. Dink	ins							
Elimed 1 20 4/5 20 INS	TRUCTIONS	900							
reporting period should be a given to those species of le	sted on form, other species occurring on readded in appropriate spaces. Special atterocal and National significance.								
(2) First seen: The first refuge record for period, and the number seen	the species during the season concerned in . This column does not apply to resident s								
tration:	The greatest number of the species present in a limited interval of time.								
(4) last seen: The last refuge record for period.	the species during the season concerned in	the reporting							
sentative breeding areas.	roduced based on observations and actual co Brood counts should be made on two or more . Estimates having no basis in fact should	areas aggregating							
	he species using the refuge during the period that used for peak concentrations, depend								

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge LeLean Months of January to April 19 51

	(1) Species	(2 First) Seen	Peak Conc) entration	(4) Last S		Young P	5) roduced	(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for perio
I.	Swans: Whistling swan	Estimate sentativ	d number e breedir	of young pr g areas . B	duced bas	d on observ			areas aggr	
II.	Geese: Canada goose Cackling goose Brant	The last period.	reinge :		-	during the	7.			But
	White-fronted goose Snow goose Blue goose		ma the n test numb	None Obse		an does not ent in a li			pecies .	
II.	Ducks:			record for		during the				ring.
	Mallard Black duck	87. 12 40	4/5	100	4/5-20	Common	ficance.		Meion about	200
	Cadwall Baldpate	In addite	on to th	10	4/20-30 4/10-20				efuge durin	60
	Pintail Green-winged teal	20	4/5	100	CLIONS.					160
	Blue-winged teal Cinnamon teal	• • • •	• • • •	20	4/20-30	geborred p2	Chest	y M Paris	NE TOTAL	20
	Shoveller Wood duck			20	ek					20
	Redhead Ring-necked duck			10	- 10					20
	Canvas-back Scaup		i di ki wa s	10 75	4/5-15	pal neating	eress thi	S BORSON		20
	Golden-eye Buffle-head	roed cou	the .	5	4/20-30					10
	Ruddy duck				yters	used by cor	entration	a Fact	ing stem.	
V.	Coot:	LASTEG -		50	HOUK A	materiowi nu	peza		- PEZ_	50

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

jutation - Dublicating Section, Marington, SUMARIES

Dates waterfowl counts made		Total waterfowl usage du	uring period 720	
Percent of waterfowl area of	eovered	Peak waterfowl numbers	435	50
Dates brood counts made		Areas used by concentrat	cions Entire area.	
Percent of area covered in	brood counts	1/2-00		20
Total production:	10	Principal nesting areas	this season	F20
Geese	10			50
Ducks	30			30
Coots	80	Reported by Ch	sley M. Dinkins	
(1) Species:(2) First seen:(3) Peak concentration:	In addition to the birds listed reporting period should be added given to those species of local the first refuge record for the period, and the number seen. The greatest number of the species of the	ded in appropriate spaces. al and National significance ne species during the seasor This column does not apply ecies present in a limited:	Special attention should be a concerned in the report to resident species. Interval of time.	ting
(4) Last seen:	The last refuge record for the period.	e species during the season	concerned in the report	ing
(5) Young produced: (6) Total:	Estimated number of young processentative breeding areas. Bre 10% of the breeding habitat. Estimated total number of the	ood counts should be made or Estimates having no basis :	n two or more areas aggr in fact should be omitte	regating
(1)	may or may not be more than the of the migrational movement.			

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Pretty Rock Months of January to April 19 51

1

NO

	(1) Species	(2 First		Peak Conc		(4) Last S		Young P		(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	Estimate sentativ	d number s breedin	of young pro	duced bear	d on observation of anough be		actual c	ounts on re areas aggr	pre- egating
II.	Canada goose Cackling goose	The last period.	refuge x	scord for th		during the	sesson co		the report	TUR 150
	White-fronted goose Snow goose Blue goose			ar of the s	estės bres					100 150
II.	Ducks:			record for amber sem.		during the				cing
	Mallard Black duck	87A 20 po	3/27	500	4/1-15	ional signi				1000
	Cadwall Baldpate Pintail	32 200	3/27 3/27	20 200 500	4/20-30 4/1-15	p other aper ropriate sp	The second secon		fuge durin	20 200 1000
	Green-winged teal Blue-winged teal Cinnamon teal Shoveller		• • • •	• • 50 50	4/20-30	Reported by	- Agros	oy F. Bin	j je	100
	Wood duck Redhead			25						50
	Ring-necked duck Canvas-back Scaup	6	3/27	50 300	4/20	pal nesting	areas thi	s seanon		50
	Golden-eye Buffle-head		PB	5 5	4/20-30					10
er au	Ruddy duck				Areas	ased by cor	mentration	s Ameiro	SE68.	
IV.	Coot:	Asteq		20	Louix	steriosi nu	ppera .		1,725	50

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

(Sept. 1950) interior - Daplicating Section, Washington, Dec. 22449

Dates waterfowl counts made	Total waterfowl usa	Total waterfowl usage during period 3,590							
Percent of waterfowl area covered	Peak waterfowl numb	ers1,725	50						
Dates brood counts made	Areas used by conce	ntrations Entire area.							
Percent of area covered in brood counts	8 4/20-30		10 50						
Total production:	Principal nesting a	reas this season	₹30 33						
Geese	80								
Ducks	20 a		100						
Coots	Reported by	Chesley M. Dinkins	700						
(1) Species: In addition to the reporting period s	INSTRUCTIONS e birds listed on form, other specishould be added in appropriate spacecies of local and National signifi	es. Special attention shoul							
period, and the m	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.								
tration:	er of the species present in a limit	ited interval of time.	130						
(4) Last seen: The last refuge reperiod.	ecord for the species during the se	eason concerned in the report	ing Teo						
sentative breeding	of young produced based on observat g areas. Brood counts should be many ng habitat. Estimates having no be	ade on two or more areas aggr	regating						
	umber of the species using the refu more than that used for peak conce 1 movement.								

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

Refuge Stewart Lake Months of January to April 19 51

(1) Species		(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	Estimate sentativ	d number s breedin	of young pr g areas. B	duced bear	d on obser	ations an made on t	lattoal o mo or more	areas aggi	pre- egating
II.	Canada goose Cackling goose Brant	10 40 mg	3/26	200	3/25-4/5	during the	Scalaon co		the report	200
	White-fronted goose Snow goose Blue goose	The great		100	4/10-20	ent in a li			me.	150
II.	Ducks:			record for a		during the			the repor	chag
	Mallard Black duck	ET 20 10	8/26	1000	4/1-20	ional signi			-	1500
	Cadwall Baldpate Pintail	\$0 0	3/26	10 150 1000	4/20-30 4/1-20 3/25-4/10	g other spe	mies occu.	ring on r	fuge durin	10 300 1500
	Green-winged teal Blue-winged teal Cinnamon teal			. 200	4/20-30	geborted by	(Sept.)	ey a, bin	J. 1167	800
	Shoveller Wood duck			80	4/15-80					30
	Redhead Ring-necked duck			20	4/20-30	1 1	-			50
	Canvas-back Scaup			200	4/10-20	pal nesting	areas thi	B Barreon		300
	Golden-eye Buffle-head	prood com	¢8							
	Ruddy duck				Areas	used by cor		. 1915	Szo gres.	
IV.	Coot:	PASTEG		25	4/20-30	steriowl nu	ipers .		5,165	50

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

(Sept. 1950) Interdor - Duplicating Seption, Washington, D.C. 82449

Dates waterfowl counts made	Total waters	Total waterfowl usage during period 4,670					
Percent of waterfowl area covered	\$6 4/20-50	Peak waterfowl numbers					
Dates brood counts made	Areas used t	by concentrations	ntire area.				
Percent of area covered in brood count	68						
Total production:	\$00 9/10-50	esting areas this season	250				
Geese	50 4/20-80		00				
Ducks	20 4/16-60		20				
Coots	Report	ted by Chesley N. Di	ন বাল				
reporting given to	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species. The greatest number of the species present in a limited interval of time.						
(4) Last seen: The last period.	refuge record for the species during	g the season concerned i	n the reporting				
sentative 10% of the (6) Total: Estimated may or may	number of young produced based on obreeding areas. Brood counts should be breeding habitat. Estimates having total number of the species using the young more than that used for pergrational movement.	ild be made on two or mor ng no basis in fact show the refuge during the pe	re areas aggregating ald be omitted. eriod. This figure				

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since these data are necessarily based on an analysis of the rest of the form.

More and any Refuge White Lake Months of January

63

10

(1) Species		(2) First Seen		Peak Conc) entration	Last S		Young P		(6) Total	
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period	
I.	Swans: Whistling swan	Estimate nemtati	d number me braedh	of young pa	odaced bas reed count	ad on obser		d actual o	ounts on re areas agg		
II.	Geese: Canada goose Cackling goose	bearoge 40 mag	3/24	100	3/20-4/5	during the	Bearson oc	ncerned in	the repor	100	
	White-fronted goose Snow goose			SE 0 50 18 8	4/5-20	ent in a l				50	
	Blue goose			umber sees.		mm do es no					
II.	Ducks:	The fire	t refuse	record for	the specie	durang th	8 558 800 0	mostary ?	a the repor	bing.	
	Mallard	ETARS 20	3/26	500	4/10-20	Monal sign	Tiomice.			600	
	Black duck	reportin	g period	should be a	ded in ap	moprists s	goes . Sp	ocial atte	ation shoul	g pe	
	Cadwall Baldpate Pintail	20 20 E	3/26	3 0 5 0 5 00	4/10-20	t, other sp	olss occu	Fring on 1	efuge durin	100 600	
	Green-winged teal	-	0/20	000	THE LUMBS					555	
	Blue-winged teal . Cinnamon teal		• • • •	200	4/20-50	Reported by	- 6370	NOT H. DA	gegan)	200	
	Shoveller Wood duck			20	•					20	
	Redhead Ring-necked duck		-	15						15	
	Canvas-back			15	A. Trans	bay neating	errapes an	*** **********************************		15	
	Scaup			100	4/10-20	mai mandan		a cocona		100	
	Golden-eye Buffle-head	panog son	aba .								
	Ruddy duck				Areas	med by con	centratio		Meltre enten		
nge	Coot:	opvered		25	4/2-30	sterfowl m	spera		TIBE	50	

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(Sept.1950) Interfer - Duplicating Section, Washington, D.C. 82449

Dates waterfowl counts made		Total waterfowl usage during period 1870					
Percent of waterfowl area	covered	Peak waterfowl numbers	1195				
Dates brood counts made		Areas used by concentrations	Entire area.				
Percent of area covered in	brood counts						
Total production:	16	Principal nesting areas this season	n 100				
Geese	1.6						
Ducks	10		53				
Coots	800	Reported by Chesley N. 1	dinkins				
 (1) Species: (2) First seen: (3) Peak concentration: (4) Last seen: 	reporting period should be ad given to those species of loc The first refuge record for the period, and the number seen. The greatest number of the species of the species of loc the s	ded on form, other species occurring on ded in appropriate spaces. Special at all and National significance. The species during the season concerned this column does not apply to resident secies present in a limited interval of the species during the season concerned in a species during the season concerned in the species during the species during the season concerned in the species during the season concerned in the species during the species d	in the reporting t species.				
(5) Young produced: (6) Total:	Estimated number of young prosentative breeding areas. Br 10% of the breeding habitat. Estimated total number of the	educed based on observations and actual cood counts should be made on two or more Estimates having no basis in fact shows species using the refuge during the part of the peak concentrations, dependent	counts on repre- re areas aggregating uld be omitted. eriod. This figure				

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

30 3-1751 Form NR-1A MIGRATORY BIRDS (other than waterfowl)

Months of January to April (Nov. 1945) Lake Ile Refuge Refuge (4) (5)(6)(1)(2)(3)First Seen Peak Numbers Last Seen Species Production Total Estimated Number Total # Total Common Name Number Date Number Date Number Date Colonies Nests Young Number P I. Water and Marsh Birds: Sand Hill Crane 4/4 4/4-15 600 200 400 White Pelican 4/25 4/25-30 12 50 Franks Falcem 53 B-1 day. Rengh-Legg BELOWY DIEL Reported by Ches ay H. Tipiden INSTRUCTIONS n, and list group in A.O.U. (I) Species; obto. II. Shorebirds, Gulls and Terns: Manage Laboration priate spaces Killdeer signifficance 4/16 30 7 Willett 4/28 4/17 4/20-80 Franklin's Gull 150 500 1000 Ring Billed Gull 4/20-30 50 4/16 100 Herring Gull 4/17 4/20-30 3 50 The first reinge record for the The greatest number of the species present in a limited interval of time. eak Numbers The last refuge record for the species during the season concerned Last Seen Estimated number of young produced based on obser er of the species using the re Estimated total m (over)

(1)	(2)		(3	3)	(4)		(5)	(6)
II. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	2 4	4/15	10		MIGR (other t	0,91	ake Ilo Be	Refuge	Nov. 1945)
(5) (6)	~d	nes	(4) Last S		(3)	net	(2) First 8	(1)	v 2
IV. Predaceous Birds:	Tedau	1195		3/3 0/00	MIDWA ALDIS L				
Golden eagle Duck hawk Horned owl Magpie Raven		4/5 2/20	4	1/1-2/28 4/10-50	Number	Date	Number 200	n Name i Marsh Birds:	A Stater and
Crow March Hawk Sparrow Hawk Prairie Falem Am. Rough-Lagged	2 1	5/26 4/1 5/28 1/8	100 20 10 4	4/1-15 4/1-15 4/5-20 1/1-2/28 2/20-3/3		4/50			300 20 10 4
Snowy Owl	Common		3	1/1-50		Reporte	d by Ches	ley M. Dinkins	5

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gavilformes to Ciconiiformes and Gruilformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. <u>Doves and Pigeons</u> (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

Time a tork falsensed

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total newer of the species using the region during the period concerned.

Refuge District IV Essements, as listed Months of January to April , 194/51

(3) (4) (5) (6) (7) (2) (1) Young Sex Remarks Removals Total Species Density Produced Ratio Number broods obs'v'd. Estimated Total For Research For Restocking Estimated Hunting number Pertinent information not Acres specifically requested. using Cover types, total per List introductions here. Percentage acreage of habitat Refuge Common Name Bird LAKE ILO (300 at the beginning of the period) 300 at beginning of period. Phonsant 100 70% lost during March storm. Sharp-tailed Grouse 100 Hungarian Partrille 100 ELEDDENINOOP Estimated. Phospant 10 Sharp-tailed Groise 20 Hungarian Partrilge 40 LAKE PATRICIA Phonont Estimated. 200 Sharp-tailed Grosse 25 Hungarian Partrilgo 50 LEGION LAKE 40 at beginning of period but Phonuant very few left this spring. Sharp-tailed Gross 20 Hungarian Partrillge 50 MOIRAN 5 Estimated. Phospant Sharp-tailed Groine 20 Hungarian Partrillge 40

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY:

Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

Refuge District IV Basements, as listed Months of January to April , 194 51 (3) (4) (1) (2) (5) (7) (6) Young Sex Remarks Species Density Removals Total Produced Ratio Number broods obs'v'd. Estimated Total For Research For Restocking Estimated Hunting number Pertinent information not Acres specifically requested. Cover types, total using per List introductions here. Refuge Common Name acreage of habitat Bird Percentage PRESENT ROCK Phonont Estimated. 100 Sharp-tailed Grouse 10 Hungarian Partridge 50 STEWART LAKE Estinated. Phoasens 150 Sharp-tailed Grouse 100 Hungarian Partridge 100 cher, phesents. WHITE LAKE Pheagent Estimated. 50 REMOVALS: Sharp-tailed Grouse 20 Hungarian Partridge Ton J908 * Only columns applicabl ber aves borre

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY:

Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

while is afroment W tale to

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

Refuge District IV Essements as listed: April 30, 19451

Indicate inventory method(s) used, size of sample area(s), introductions, and any other timent information not specify "Iy requested."

(1) Species	(2) Density	mis beq!	Str		3) vals	*ene	n nose	oo doo Di		(4) tion	of Fur	125	LOES	13	(5)
n North Animels	in the "Field Book o	rel, mu re found the "Mas	s es bas	dne vnon	rano. Ind	ni se ni se	CATANA MAIN THE Mail Mail	Share 7	Ira ppi.	ng	ge		e d	oyed	Total Popula-
North	Cover Types & Total	Acres Per	Hunting	Fur Harvest	Predator	For Re- stocking	For Research	Permit	ppers	Refuge Share	al Refuge s Shipped	Refuge Income	s Donated	s Destroyed	tion
Common Name	Acreage of Habitat	Animal	Hun	Fur	Pre	For	For	Number	Trappe	Ref Sha	Total Furs	Ref Inc	Furs	Furs	
Musicrat	Lake Ile	onsider	0 89	None	eaori	t of	l'arlo	T-4880	etiqq	14		127	E	III .	300
Mink	egyt zevoo yd Lamina	teg set	DB CL	100	1971 CZO	e ed	d will	s. Dens	number		in the				20
Coyote	om the refuge manage	n dreme	Ecal	5 M (C	bens	pre	od od	at noth	ngo kan						20
Redger	se enco telugel once as	found of	gype	Marve	on do	in e	80108	To redm	m ed:						
Wassel	segnado dusoflingis	s dosox	b bai	SWIE!	80	on b	en ne	id surro in	t såd:					31.29	8 6 2 3
House Cet	of ushous perfects to	d bluod	8 804		WOO.	, sea	NO TEN	ea of co	is odi						2
Beaver	of protifications are pro-	ds as	LEGARGIA	00	MI ULE	HOL	RELOI	HI DOTIS		4 14			- [-5]		. 3
Cotton tail Rabbit	li alodmys ogy/ brabe	de Shar	Dia . A		MI BE	e change	torde	sign state	Tables of	4 5 6					20 60
Jack Rabbit	l'abare possible Fi	eau ad	bluor	9 6	oM as	Sari	Sere eno	fo Manag	HEBE PR		15.95				60
Muskrat	Hiddenwood	anolda	rresc	o wisi	dos i	o bei	ad eg	85- 8-14	30 Jb					15	200
Mink	Harato Onto Soci	to est	bru	0000	bod	eg me	Surve	57 5-14	- Total			- 4	1	14	15
Coyote			1			a ROLL	mes 1	obcer book	indic						0
Skink and to d	C Character Services				· ·	46									10
The Course State of the Land o	emoved since April 3 ting under heading li	Fa3 1000	to Cov	DEFENTS	WILE Y		ELA	t edt et			19.50	ALS:	ALESS.	(E)	6
MerreT		1000g	-	-				rae year,	74910						10
Jack Rabbit	trapper's share, and	radmin	Jin	zel s	ris s	il e	u'i be	rgend-en	uda ot	150	E TO F	OITIS	1921	a d	8
Cotton Tail Rabbit	and the total income		d be	go Edi	ad.L	q 20	тебац	s edd ed.	io2bm7						40
Red Fox	and fure taken by S	Twl beq	BIJ-	mare	Hag	mf and	test	by spec	refug	1			-		6
-mu lo	es destroyed because	ob, spec	8 10	elle	q lo	unber	n Las	nel. To	person	19				1	1 - 1 19
perido	to anoldudidant of i	e donate	THE	bos 4	no.bt	cond	maged	iss or de	mutag						
	The state of the s	provide	THE REAL PROPERTY.	00 80	a ur	mrode	ed be	mode me.	ageno:	1					

REMARKS:

POTEN HR-A

Redger

duraleut

Coyobe

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Form NR-4 - SMALL MAMMAIS (Include data on all species of importance in the management program; i.e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc.

(Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan. "List of North American Recent Mammals" by G. S. Miller, Jr., a very good reference, is now out of print, although a revision is scheduled for publication in the near future.)

(2) DENSITY:

Applies particularly to those species considered in removal programs (public hunts, etc.) Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year. Also show any removals not falling under heading listed.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market and the total income to the refuge by species, including share-trapped furs and furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS !

REAL

Indicate inventory method(s) used, size of sample area(s), introductions, and any other tinent information not specifically requested.

Refuge District IV Basements as listed: April 30, 194/51 To'l due one bed inc Birats, beaver, coon, mink, coyote. Data on small

Indicate inventory method(s) used, size of seaple area(s), introductions, and any other timent information not special Ty requested.

(1) Species	(2) Density	ola begin		3) vals	SOLECT	rom	Dispo	(4) sition	of Fur		SPECI	(5)
North Minute	the classical periods of in the Vertebrate of the Vertebrate i	are found	ent dee ony sad	curr curr	ni som	gray on na	Share Trap	ping	nge oed		Donated	Total Popula-
rth is now mear	Cover Times & Total	Acres .	ing	Predator	For Restocking	For Research	pers	න න භ	1 Refuge Shipped	ige ome		tion
Common Name	Acreage of Habitat	Per Animal	Hunting Fur Harvest	Predato	For	For	Permit di Number	Refuge Share	Total Furs	Refuge Income	Furs	
Musicrat Mink	Lake Patricia	opneider	None	nose.	y to t	Last.	lier partic	qql.		a XT	DEWEG	60
Skunk Jack Rabbit Cotton tail Rabbi	Trapping permit was an this refuge.	ot issue	d #	spres aced an co	e pred a pred in ea	d od d od serve	None	man hirit oeld				10 12 10 20
Nuckrat Nink	Stewart Lake	enceps a should be to us to	ae Jae de	T 60 Cove to true	pes,	rer to	#60, 51 &	ent :				20
Skunk Cotton tail Rabbi Jack Rabbit	dard type symbols it to where possible. Here and counts on represent	tt. Sta d be use wations	e dints Tuots 7 res to La	iq sa .cW a	Serie	one	56 3-1400	ne.i.				12 20 15
Weasel Muskrat	White Lake	Size of	bus bes	nod v	ny met arks.	Surv r Hem	#52 3-1400	bix.				20
Mink Skunk Cotton tail rabbi	ing under heading list	stegory not fal	als oper	yas yas	recinunt rocia p	Ledo	icate the t	PTRE .		MEL	IOM IS	10
Jack Rabbit	and the total income to	fumber, d market upped fur	pendt hipped t bare-tre	idt d k stl k stl	ne lis	redam redam	#53 5-1400	Rt (Inc	M NO	OFTIE	DI SPO	150
Mink Skunk Weasel		nega doa: ejunob e ebivong d	Mone	int line	ted.	n Ind began	of Lennos ab to assum Lucia seton	iei irii igi				10
REMARKS:	Ut lings to as no bedro	oles rep	each spe	n og	olialu	qoq I	ajoj bajemi	Est	MOITAL	POPU	IATOT	161

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i.e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan. "List of North American Recent Mammals" by G. S. Miller, Jr., a very good reference, is now out of print, although a revision is scheduled for publication in the near future.)

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(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS L

BESI

Indicate inventory method(s) used, size of sample area(s), introductions, and any other tinent information not specifically requested.

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LOBBET

Refuge District IV Easements as listed: April 30, 194 51 To'l Joseph bedtimo ed yes sansbor Llegs no stat

(1) Species	(2) Density	nla baqi	Sta		3) vals	.0760	nomi	Dis		4)	of Fur	: 88:	coas	8 ((5)
Common Name	Cover Types & Total Acreage of Habitat		Hunting	Fur Harvest	Predator Control	For Restocking	For Research	Share T	rappin	g	defuge ipped	Refuge Income	Furs Donated	Furs Destroyed	Total Popula- tion
	d where possible. Pi and counts on represe sample ares or aress	ods, review Sta to Sta to be use rations dise of	brus	None 7 None 8	e and series and serie	to be	ulari etail ity t ity t ity t con ne con ne dorma ver t con s con ne con	#56 - 3-1400 pitell o'l birrods birrods	number number the nation of the day of the d			TY:			150 6 6 4 20 10 60 5 6 2
refuge share. to the ervice of un- other	ling under heading little trapper's and the total income	not fal number, narket nped fur ach spec donate provide	ding ding ding ding ding ding ding ding	reme shipp share slbs and and and	et the sale sale sale sale sale sale sale sal	re li of p inclu inclu cond shown	Also redmin redmin red. red. red. d. be	ous year are-traps to the interest or distribution of the interest or distribution of the stoul	previ Indie Indie reiug perso primn ageno	¢810	H OF	4	FIRI	I (7)

REMARKS:

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Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i.e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

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REMARKS

1413

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EASEMENT REFUGES OF DISTRICT 4a

Clearwater Easement:

The area was visited on April 25 but at that time the lake was still frozen over. Some reposting will be necessary and will be taken care of later in the spring.

Shell Lake Easement: (McAlmond)

The area was visited on April 25. The lake was still frozen over but the peak run-off had already occurred. Some signs and markers will have to be replaced and will be accomplished at a later date.

Zahl Easement:

This refuge was inspected on April 25 to inspect the dike for damage and to inspect the newly acquired Section 36. The water was 1" below the spillway at the time of inspection. Some badger damage was evident in the dike but on the whole the dike was in good shape, and does not appear to have received any further damage.

The private fence on the newly acquired Section 36 is in sad shape and it would not be to our advantage to acquire it for the Government. The pasture and forage in the section is poor and little grazing is recommended this year to allow the grass to come back.

A few refuge signs and markers need to be replaced and some fence repair is necessary on the Government-owned portion of the refuge. This work will be done later in the year.

At the time of the inspection the lake was being used by an estimated 3500 birds, mainly Scaup but with some Mallards, Pintails, Redheads, and Gadwall.

Respectfully submitted:

John R. Frye Refuge Manager

May 15, 1951

Approved:

Acting Regional Director

Date: MAY 2 1 1951

Refuge Shell (McAlmend) Months of January to April 19 51

	(1) Species	(2) First Seen		Peak Conce		(4) Last S		Young F	(6) Total	
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I.	Swans: Whistling swan	Estimate sentativ	d musber e breedir			d on obser			ounts on reserved	
II.	Geese: Canada goose Cackling goose Brant	The last period.		n over at e				poerned in	the report	gug
	White-fronted goose Snow goose Blue goose			unber seen.						
II.	Ducks: Mallard Black duck Gadwall Baldpate Pintail	Fiven to The first	perdod prose sp	a birds list should be acted of local record for	ed on form ded in app al and Mar he specie	coprists signi donal signi during the	aces. Sp ficance. season c	scial atte	artdon shoul	i pe
	Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck			2.198.140	RELICIE	Reported by				
	Redhead Ring-necked duck Canvas-back Scaup Golden-eye	ranog can	L016		Princ	ipal nesting	areas th	2 509200		
	Buffle-head Ruddy duck				Aroda	need by con	centration			
IV.	Coot :	Page T			Peak	strentony m	spera T			
		1	1		Total	strariost r	tuke qma	L berred	1	

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449 Form NR-1

(Sept.1950) interior - Daplicating Section, Washington, D.C. 22449

Dates waterfowl counts made	Total waterfowl usage during period
Percent of waterfowl area	covered Peak waterfowl numbers
Dates brood counts made	Areas used by concentrations
Percent of area covered in	brood counts
Total production:	Principal nesting areas this season
Geese	
Ducks	
Coots	Reported by
Pintail, Pintail,	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak concentration:	The greatest number of the species present in a limited interval of time.
(4) Last seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

MY LEEGLON

Refuge Clearwater Months of January to April 19 51

(1) Species	(2) First Seen		Peak Conc) entration	(4 Last		Young P	(6) Total	
Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. Swans: Whistling swan	Estimate sentativ	d mmber e breedi	of young pr g srees. B	rood count				ounts on re	
II. Geese: Canada goose Cackling goose Brant White-fronted goose		4	ser of the s	-					lng
Snow goose Blue goose	berlog,		en over at e					pectes.	
Mallard Black duck Gadwall Baldpate Pintail	reporting	period those sp	thould be sected of lo	ded in appeal and Na	ropriste e Nonal sign	proes. Sp Minemoe.	ecial atte	ition shoul	pe
Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck					Reported by				
Redhead Ring-necked duck Canvas-back Scaup Golden-eye	mang com	r sa		Princ	ipal nesting	g areas th	de sesson		
Buffle-head Ruddy duck				Areas	med by con	mentratio			
IV. Coot:	Tered			Pask 1	sterios n	nbers			
				Total	paterioni 1	nage dura	Demrog		1

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(Sept.1950) Interior - Duplicating Section, Washington, D.C. 52449

Dates waterfowl counts mad	Total waterfowl usage during period
Percent of waterfowl area	covered Peak waterfowl numbers
Dates brood counts made	Areas used by concentrations
Percent of area covered in	brood counts
Total production:	Principal nesting areas this season
Ducks	
Coots	Reported by
Pintail, Order-pinged test	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
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(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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WATERFOWI

30

Refuge Lake Zahl Months of January to April 19 51

	(1)	may or	y not be	1016 cp (3			dentistio		5) moon ey	(6)	
	Species	First	Seen	Peak Conc	ntrattion	Last S	sen	Broods	roduced	Total Estimated	
	Common Name	Mumber	Date	Number	Date	Number	Date	Seen	Total	for period	
I.	Swans: Whistling swan	named and a	bserved.		ood count	sponja pe		no cr. more		egating	
		Estimate	d number		ducad basa	d on observ	ations an	lactual c	bunts on re	bre-	
II.	Geese:	None	Observed	/							
	Canada goose Cackling goose Brant	The last	refuge r		e species	during the	Beardon co	acerned in	the report	ing .	
	White-fronted goose Snow goose	The grea	best numb	er of the sp	ectes pre	ent in a li	mited int	erval of t	ime*		
	Blue goose			пирет нееп.		mit go su kroj			becree -		
II.	Ducks:	The firs	refuge	record for	be species	dwding blie	Season o	meamed i	t the repor	sing	
11.	Mallard	STARU PO		200	4/25	ional signi				400	
	Black duck Gadwall	THE SCHOOL	bserved.	Few	4/25	, other aper ropriate ap		ming on r	wings during	15	
	Baldpate Pintail		bserved.	200	4/25					400	
	Green-winged teal	None	bserved.	22000	ELIGIDAL MINES						
	Blue-winged teal Cinnamon teal	"	11		1	Raported by		obs R. Fr	le le		
	Shoveller	. 11	11		1						
	Wood duck	11	11								
	Redhead		-	Few	4/25		-			20	
	Ring-necked duck		bserved.			9 9					
	Canvas-back	11	11	0500	1/05	pal nesting	areas fix	S SEREOR	-	2000	
	Scaup Golden-eye	None	bserved	2500	4/25					3000	
	Buffle-head	110,116	11								
	Ruddy duck		11		phose	used by con	em tration	o Open	Appl Bleet		
	Coot:		bserved.		Poak v	sterios, nu	pers		0003		
	minestatory commen news		Deat Age		LOTST	secentori u			\$500		

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

(Sept. 1950) interior - Duplicating Section, Washington, Dec. 82449

Dates waterfowl counts made		Total waterfowl usage during period						
Percent of waterfowl area	covered	Peak waterfowl numbers	3000					
Dates brood counts made		Areas used by concentrations	Open water areas					
Percent of area covered in	brood counts							
Total production:	None Observed.	Principal nesting areas this	s season 2000					
Geese	Few Sheemed	7-00	30					
Ducks	- R - P							
Coots	и и	Reported byJo	hn R. Frye					
Pinestl.	INST	RUCTIONS	700					
(1) Species:	reporting period, should be a	ted on form, other species occurred ded in appropriate spaces. Special and National significance.	ring on refuge during the reial attention should be					
(2) First seen:		the species during the season cor This column does not apply to a						
(3) Peak concentration:	The greatest number of the s	pecies present in a limited inter	rval of time.					
(4) Last seen:	The last refuge record for t period.	he species during the season cond	cerned in the reporting					
(5) Young produced:	sentative breeding areas. B	oduced based on observations and rood counts should be made on two Estimates having no basis in fa	or more areas aggregating					
(6) Total:		e species using the refuge <u>during</u> that used for peak concentrations						

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.